

G. P. Redman
A N
E S S A Y

CONCERNING
Human Understanding.

IN FOUR BOOKS.

Written by JOHN LOCKE, Gent.

THE EIGHTEENTH EDITION.

VOLUME II.

ECCLES. xi. 5.

*As thou knowest not what is the way of the Spirit, nor how the bones
do grow in the womb of her that is with child: even so thou
knowest not the works of God, who maketh all things.*

Quam bellum est velle confiteri potius nescire quod nescias, quam
ista effutientem nauseare, atque ipsum sibi displicere!

Cic. de Nat. Deor. l. 1.

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4. *Of the Names of simple Ideas.*
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6. *Of the Names of Substances.*

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B O O K IV.

C H A P. I.

Of Knowledge in general.

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 2. *Knowledge is the Perception of the Agreement or Disagreement of two Ideas.*
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C H A P. X.

Of our Knowledge of the Existence of a GOD.

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3. He knows also, that nothing cannot produce a Being, therefore something Eternal.
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5. And most knowing,
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9. First, Reason fails us for Want of Ideas.
10. Secondly, Because of obscure and imperfect Ideas.
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12. Fourthly, Because of wrong Principles.
13. Fifthly, Because of doubtful Terms.
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OF

O F

Human Understanding.

B O O K III.

C H A P. I.

Of Words, or Language in General.

§. 1. **G**OD having designed man for a sociable creature, made him not only with an inclination, and under a necessity to have fellowship with those of his own kind; but furnished him also with language, which was to be the great instrument and common tie of society. *Man* therefore had by nature his organs so fashioned, as to be *fit to frame articulate sounds*, which we call words. But this was not enough to produce language; for parrots, and several other birds, will be taught to make articulate sounds distinct enough, which yet by no means are capable of language.

Man fitted to
form articu-
late sounds.

§. 2. Besides articulate sounds, therefore, it was farther necessary, that he should be *able to use these sounds, as signs of internal conceptions*; and to make them stand as marks for the *ideas* within his own mind, whereby they might be made known to others, and the thoughts of men's minds be conveyed from one to another.

To make them
signs of ideas.

§. 3. But neither was this sufficient to make words so useful as they ought to be. It is not enough for the perfection of language, that sounds can be made signs of *ideas*, unless those *signs* can be so made use of, as to comprehend several particular things: for the multiplication of

To make ge-
neral signs.

words would have perplexed their use, had every particular thing need of a distinct name to be signified by. To remedy this inconvenience, language had yet a farther improvement in the use of general terms, whereby one word was made to mark a multitude of particular existences: which advantageous use of sounds was obtained only by the difference of the *ideas* they were made signs of: those names becoming general, which are made to stand for general *ideas*, and those remaining particular, where the *ideas* they are used for are particular.

To make general signs.

§. 4. Besides these names which stand for *ideas*, there be other words which men make use of, not to signify any *idea*, but the want or absence of some *ideas* simple or complex, or all *ideas* together; such as are *nihil* in Latin, and in English, *ignorance* and *barrenness*. All which negative or privative words cannot be said properly to belong to, or signify no *ideas*; for then they would be perfectly insignificant sounds: but they relate to positive *ideas*, and signify their absence.

Words ultimately derived from such as signify sensible *ideas*.

§. 5. It may also lead us a little towards the original of all our notions and knowledge, if we remark, how great a dependance our *words* have on common sensible *ideas*; and how those which are made use of to stand for actions and notions quite removed from sense, *have their rise from thence, and from obvious sensible ideas, are transferred to more abstruse significations*, and made to stand for *ideas* that come not under the cognizance of our senses: v. g. to *imagine*, *apprehend*, *comprehend*, *adhere*, *conceive*, *instil*, *disgust*, *disturbance*, *tranquility*, &c. are all words taken from the operations of sensible things, and applied to certain modes of thinking. *Spirit*, in its primary signification, is breath; *angel*, a messenger: and I doubt not, but if we could trace them to their sources, we should find, in all languages, the names which stand for things that fall not under our senses,

senses, to have had their first rise from sensible *ideas*. By which we may give some kind of guess, what kind of notions they were, and whence derived, which filled their minds, who were the first beginners of languages; and how nature, even in the naming of things, unawares suggested to men the originals and principles of all their knowledge: whilst to give names, that might make known to others any operations they felt in themselves, or any other *ideas* that came not under their senses, they were fain to borrow words from ordinary known *ideas* of sensation, by that means to make others the more easily to conceive those operations they experimented in themselves which made no outward sensible appearances; and then, when they had got known and agreed names to signify those internal operations of their own minds, they were sufficiently furnished to make known by words all their other *ideas*; since they could consist of nothing, but either of outward sensible perceptions, or of the inward operations of their minds about them; we having, as has been proved, no *ideas* at all, but what originally come either from sensible objects without, or what we feel within ourselves, from the inward workings of our own spirits, of which we are conscious to ourselves within.

§. 6. But to understand better the use and force of language, as subservient to instruction and knowledge, it will be convenient to consider, Distribution.

First, *To what it is that names, in the use of language, are immediately applied.*

Secondly, Since all (except proper) names are general, and so stand not particularly for this or that single thing, but for sorts and ranks of things; it will be necessary to consider, in the next place, what the sorts and kinds, or, if you rather like the Latin names, *what the species and genera of things* are; wherein they consist; and how they come to be made. These being (as they ought) well looked into, we

shall the better come to find the right use of words; the natural advantages and defects of language; and the remedies that ought to be used, to avoid the inconveniencies of obscurity or uncertainty in the signification of words, without which it is impossible to discourse with any clearness, or order, concerning knowledge: which being conversant about propositions, and those most commonly universal ones, has greater connection with words, than perhaps is suspected.

These considerations, therefore, shall be the matter of the following chapters.

C H A P. II.

Of the Signification of Words.

Words are sensible signs necessary for communication.

§. I. **M**AN, though he have great variety of thoughts, and such, from which others, as well as himself, might receive profit and delight; yet they are all within his own breast, invisible, and hidden from others, nor can of themselves be made appear. The comfort and advantage of society not being to be had without communication of thoughts, it was necessary, that man should find out some external sensible signs, whereby those invisible *ideas*, which his thoughts are made up of, might be made known to others. For this purpose, nothing was so fit, either for plenty or quickness, as those articulate sounds, which, with so much ease and variety, he found himself able to make. Thus we may conceive how *words*, which were by nature so well adapted to that purpose, come to be made use of by men, as *the signs of their ideas*; not by any natural connection that there is between particular articulate sounds and certain *ideas*, for then there would be but one language amongst all men; but by a voluntary imposition,

imposition, whereby such a word is made arbitrarily the mark of such an *idea*. The use then of words is to be sensible marks of *ideas*; and the *ideas* they stand for are their proper and immediate signification.

§. 2. The use men have of these marks, being either to record their own thoughts for the assistance of their own memory; or, as it were, to bring out their *ideas*, and lay them before the view of others:

Words are the sensible signs of his *ideas* who uses them.

words, in their primary or immediate signification, stand for nothing but the ideas in the mind of him that uses them, how imperfectly soever, or carelessly those *ideas* are collected from the things which they are supposed to represent. When a man speaks to another, it is that he may be understood; and the end of speech is, that those sounds, as marks, may make known his *ideas* to the hearer. That then which words are marks of, are the *ideas* of the speaker: nor can any one apply them, as marks, immediately to any thing else, but the *ideas* that he himself hath. For this would be to make them signs of his own conceptions, and yet apply them to other *ideas*; which would be to make them signs, and not signs of his *ideas* at the same time; and so, in effect, to have no signification at all. Words being voluntary signs, they cannot be voluntary signs imposed by him on things he knows not. That would be to make them signs of nothing, sounds without signification. A man cannot make his words the signs either of qualities in things, or of conceptions in the mind of another, whereof he has none in his own. Until he has some *ideas* of his own, he cannot suppose them to correspond with the conceptions of another man; nor can he use any signs for them: for thus they would be the signs of he knows not what, which is, in truth, to be the signs of nothing. But when he represents to himself other men's *ideas*, by some of his own, if he consent to give them the same names that other men do, it is still to his own *ideas*; to *ideas* that he has, and not to *ideas* that he has not.

Words are the
sensible signs
of his *ideas* who
uses them.

§. 3. This is so necessary in the use of language, that in this respect, the knowing and the ignorant, the learned and the unlearned, use the *words* they speak (with any meaning) all alike. They, *in every man's mouth, stand for the ideas he has*, and which he would express by them. A child having taken notice of nothing in the metal he hears called gold, but the bright shining yellow colour, he applies the word gold only to his own *idea* of that colour, and nothing else; and therefore calls the same colour in a peacock's tail, gold. Another, that hath better observed, adds to shining yellow, great weight; and then the sound gold, when he uses it, stands for a complex *idea* of a shining yellow and very weighty substance. Another adds to those qualities, fusibility: and then the word gold to him signifies a body, bright, yellow, fusible, and very heavy. Another adds malleability. Each of these uses equally the word gold, when they have occasion to express the *idea* which they have applied it to: but it is evident that each can apply it only to his own *idea*; nor can he make it stand as a sign of such complex *ideas*, as he has not.

Words often
secretly refer-
red, First, to the
ideas in other
men's minds.

§. 4. But though words, as they are used by men, can properly and immediately signify nothing but the *ideas* that are in the mind of the speaker; yet they in their thoughts give them a secret reference to two other things.

First, *They suppose their words to be marks of the ideas in the minds also of other men, with whom they communicate*: for else they should talk in vain, and could not be understood, if the sounds they applied to one *idea*, were such as by the hearer were applied to another; which is to speak two languages. But in this, men stand not usually to examine, whether the *idea* they and those they discourse with have in their minds, be the same: but think it enough, that they use the word, as they imagine, in the common

acceptation

acceptation of that language; in which they suppose, that the *idea* they make it a sign of, is precisely the same, to which the understanding men of that country apply that name.

§. 5. *Secondly*, Because *men* would not be thought to talk *barely* of their own imaginations, but of things as really they are; therefore they *often suppose their words to stand also for the reality of things*. But this relating more particularly to substances, and their names, as perhaps the former does to simple *ideas* and modes, we shall speak of these two different ways of applying words more at large, when we come to treat of the names of mixed modes and substances, in particular: though give me leave here to say, that it is a perverting the use of words, and brings unavoidable obscurity and confusion into their signification, whenever we make them stand for any thing but those *ideas* we have in our own minds.

Secondly, To the reality of things.

§. 6. Concerning words also, it is farther to be considered: *First*, That they being immediately the signs of men's *ideas*, and, by that means, the instruments whereby men communicate their conceptions, and express to one another those thoughts and imaginations they have within their own breasts, *there comes by constant use to be such a connection between certain sounds and the ideas they stand for*, that the names heard almost as readily excite certain *ideas*, as if the objects themselves, which are apt to produce them, did actually affect the senses. Which is manifestly so in all obvious sensible qualities, and in all substances that frequently and familiarly occur to us.

Words by use readily excite ideas.

§. 7. *Secondly*, That though the proper and immediate signification of words, are *ideas* in the mind of the speaker; yet, because by familiar use from our cradles we come to learn certain articulate sounds very perfectly, and have them readily on our tongues, and always at hand in our memories, but yet are not always careful to examine or

Words often used without signification.

settle their significations perfectly, it *often* happens that *men*, even when they would apply themselves to an attentive consideration, do *set their thoughts more on words than things*. Nay, because words are many of them learned before the *ideas* are known for which they stand, therefore some, not only children, but men, speak several words, no otherwise than parrots do, only because they have learned them, and have been accustomed to those sounds. But so far as words are of use and signification, so far is there a constant connection between the sound and the *idea*, and a designation that the one stands for the other; without which application of them, they are nothing but so much insignificant noise.

Their signifi-
cation perfect-
ly arbitrary.

§. 8. *Words* by long and familiar use, as has been said, come to excite in men certain *ideas* so constantly and readily, that they are apt to suppose a natural connection between them. But that they *signify* only men's peculiar *ideas*, and that *by a perfectly arbitrary imposition*, is evident, in that they often fail to excite in others (even that use the same language) the same *ideas* we take them to be the signs of: and every man has so inviolable a liberty to make words stand for what *ideas* he pleases, that no one hath the power to make others have the same *ideas* in their minds that he has, when they use the same words that he does. And therefore the great *Augustus* himself, in the possession of that power which ruled the world, acknowledged, he could not make a new Latin word; which was as much as to say, that he could not arbitrarily appoint what *idea* any sound should be a sign of, in the mouths and common language of his subjects. It is true, common use, by a tacit consent, appropriates certain sounds to certain *ideas* in all languages; which so far limits the signification of that sound, that, unless a man applies it to the same *idea*, he does not speak properly: and let me add, that, unless a man's words excite the same *ideas* in the hearer, which he makes them

them stand for in speaking, he does not speak intelligibly. But whatever be the consequence of any man's using of words differently, either from their general meaning, or the particular sense of the person to whom he addresses them, this is certain, their signification, in his use of them, is limited to his *ideas*, and they can be signs of nothing else.

C H A P. III.

Of General Terms.

§. 1. **A**LL things that exist being particulars, it may perhaps be thought reasonable that words, which ought to be conformed to things, should be so too, I mean in their signification: but yet we find the quite contrary. The far *greatest part of words*, that make all languages, *are general terms*: which has not been the effect of neglect or chance, but of reason and necessity.

The greatest part of words general.

§. 2. First, *It is impossible that every particular thing should have a distinct peculiar name.* For, the signification and use of words depending on that connection, which the mind makes between its *ideas* and the sounds it uses as signs of them, it is necessary, in the application of names to things, that the mind should have distinct *ideas* of the things, and retain also the particular name that belongs to every one, with its peculiar appropriation to that *idea*. But it is beyond the power of human capacity to frame and retain distinct *ideas* of all the particular things we meet with: every bird and beast men saw, every tree and plant that affected the senses, could not find a place in the most capacious understanding. If it be looked on as an instance of a prodigious memory, that some generals have been able to call every soldier in their army

For every particular thing to have a name is impossible.

army by his proper name; we may easily find a reason why men have never attempted to give names to each sheep in their flock, or crow that flies over their heads, much less to call every leaf of plants, or grain of sand that came in their way, by a peculiar name.

And useless. §. 3. *Secondly*, If it were possible, *it would yet be useless*; because it would not serve to the chief end of language. Men would in vain heap up names of particular things, that would not serve them to communicate their thoughts. Men learn names, and use them in talk with others, only that they may be understood: which is then only done, when, by use or consent, the sound I make by the organs of speech, excites in another man's mind, who hears it, the *idea* I apply it to in mine, when I speak it. This cannot be done by names applied to particular things, whereof I alone having the *ideas* in my mind, the names of them could not be significant, or intelligible to another, who was not acquainted with all those very particular things which had fallen under my notice.

§. 4. *Thirdly*, But yet granting this also feasible (which I think is not;) yet *a distinct name for every particular thing would not be of any great use for the improvement of knowledge*: which, though founded in particular things, enlarges itself by general views; to which, things reduced into sorts, under general names, are properly subservient. These, with the names belonging to them, come within some compass, and do not multiply every moment, beyond what either the mind can contain, or use requires. And therefore, in these, men have, for the most part, stopped; but yet not so, as to hinder themselves from distinguishing particular things by appropriated names, where convenience demands it. And therefore in their own species, which they have most to do with, and wherein they have often occasion to mention particular persons, they make use of proper names; and there distinct individuals have distinct denominations.

§. 5. Besides persons, countries also, cities, rivers, mountains, and other the like distinctions of place, have usually found peculiar names, and that for the same reason; they being such as men have often an occasion to mark particularly, and, as it were, set before others in their discourses with them. And I doubt not, but if we had reason to mention particular horses, as often as we have to mention particular men, we should have *proper names* for the one, as familiar as for the other; and *Bucephalus* would be a word as much in use as *Alexander*. And therefore we see that, amongst jockeys, horses have their proper names to be known and distinguished by, as commonly as their servants: because, amongst them, there is often occasion to mention this or that particular horse, when he is out of sight.

What things
have proper
names.

§. 6. The next thing to be considered is, *how general words come to be made*. For, since all things that exist are only particulars, how come we by general terms, or where find we those general natures they are supposed to stand for? Words become general, by being made the signs of general *ideas*: and *ideas* become general, by separating from them the circumstances of time and place, and any other *ideas* that may determine them to this or that particular existence. By this way of abstraction they are made capable of representing more individuals than one; each of which, having in it a conformity to that abstract *idea*, is (as we call it) of that sort.

How general
words are
made.

§. 7. But to deduce this a little more distinctly, it will not perhaps be amiss to trace our notions, and names, from their beginning, and observe by what degrees we proceed, and by what steps we enlarge our *ideas* from our first infancy. There is nothing more evident, than that the *ideas* of the persons children converse with (to instance in them alone) are, like the persons themselves, only particular. The *ideas* of the nurse, and the mother, are well framed in their minds; and,

and, like pictures of them there, represent only those individuals. The names they first gave to them, are confined to these individuals; and the names of *nurse* and *mamma*, the child uses, determine themselves to those persons. Afterwards, when time and a larger acquaintance has made them observe that there are a great many other things in the world, that in some common agreements of shape and several other qualities resemble their father and mother, and those persons they have been used to, they frame an *idea*, which they find those many particulars do partake in; and to that they give, with others, the name *man*, for example. And thus they come to have a general name, and a general *idea*. Wherein they make nothing new, but only leave out of the complex *idea* they had of *Peter* and *James*, *Mary* and *Jane*, that which is peculiar to each, and retain only what is common to them all.

§. 8. By the same way that they come by the general name and *idea* of *man*, they easily advance to more general names and notions. For, observing that several things that differ from their *idea* of *man*, and therefore cannot be comprehended under that name, have yet certain qualities wherein they agree with *man*, by retaining only those qualities, and uniting them into one *idea*, they have again another and a more general *idea*; to which having given a name, they make a term of a more comprehensive extension: which new *idea* is made, not by any new addition, but only, as before, by leaving out the shape, and some other properties signified by the name *man*, and retaining only a body, with life, sense, and spontaneous motion, comprehended under the name *animal*.

§. 9. That this is the way whereby men first formed general ideas, and general names to them, I think is so evident, that there needs no other proof of it, but the considering of a man's self, or others, and the ordinary proceedings of their minds in knowledge: and he

General natures are nothing but abstract ideas.

he that thinks general natures or notions are any thing else but such abstract and partial *ideas* of more complex ones, taken at first from particular existences, will, I fear, be at a loss where to find them. For let any one reflect, and then tell me, wherein does his *idea* of *man* differ from that of *Peter* and *Paul*, or his *idea* of *horse* from that of *Bucephalus*, but in the leaving out something that is peculiar to each individual, and retaining so much of those particular complex *ideas* of several particular existences, as they are found to agree in? Of the complex *ideas* signified by the names *man* and *horse*, leaving out but those particulars wherein they differ, and retaining only those wherein they agree, and of those making a new distinct complex *idea*, and giving the name *animal* to it, one has a more general term, that comprehends, with *man*, several other creatures. Leave out of the *idea* of *animal*, sense and spontaneous motion, and the remaining complex *idea*, made up of the remaining simple ones of body, life and nourishment, becomes a more general one, under the more comprehensive term *vivens*. And not to dwell longer upon this particular, so evident in itself, by the same way the mind proceeds to *body*, *substance*, and at last to *being*, *thing*, and such universal terms, which stand for any of our *ideas* whatsoever. To conclude, this whole *mystery* of *genera* and *species*, which make such a noise in the schools, and are, with justice, so little regarded out of them, is nothing else but abstract *ideas*, more or less comprehensive, with names annexed to them. In all which this is constant and unvariable, That every more general term stands for such an *idea* as is but a part of any of those contained under it.

§. 10. This may shew us the reason, *why in the defining of words*, which is nothing but declaring their signification, *we make use of the genus*, or next general word that comprehends it: which is not out of necessity, but only to save the labour of enumerating the several simple

Why the *genus* is ordinarily made use of in definitions.

simple *ideas* which the next general word or *genus* stands for; or, perhaps, sometimes the shame of not being able to do it. But though defining by *genus* and *differentia*, (I crave leave to use these terms of art, though originally Latin, since they most properly suit those notions they are applied to;) I say, though defining by the *genus* be the shortest way, yet, I think, it may be doubted, whether it be the best. This I am sure, it is not the only, and so not absolutely necessary. For, definition being nothing but making another understand by words, what *idea* the term defined stands for, a definition is best made by enumerating those simple *ideas* that are combined in the signification of the term defined: and if, instead of such an enumeration, men have accustomed themselves to use the next general term, it has not been out of necessity, or for greater clearness, but for quickness and dispatch sake. For I think, that to one who desired to know what *idea* the word *man* stood for, if it should be said, that *man* was a solid extended substance, having life, sense, spontaneous motion, and the faculty of reasoning, I doubt not but the meaning of the term *man* would be as well understood, and the *idea* it stands for be at least as clearly made known, as when it is defined to be a *rational animal*; which, by the several definitions of *animal*, *vivens* and *corpus*, resolves itself into those enumerated *ideas*. I have, in explaining the term *man*, followed here the ordinary definition of the schools; which, though perhaps not the most exact, yet serves well enough to my present purpose. And one may, in this instance, see what gave occasion to the rule, that a definition must consist of *genus* and *differentia*: and it suffices to shew us the little necessity there is of such a rule, or advantage, in the strict observing of it. For definitions, as has been said, being only the explaining of one word by several others, so that the meaning or *idea* it stands for may be certainly known; languages are not always so made, according to the rules of logick, that every term

can

can have its signification exactly and clearly expressed by two others. Experience sufficiently satisfies us to the contrary; or else those who have made this rule, have done ill, that they have given us so few definitions conformable to it. But of definitions, more in the next chapter.

§. 11. To return to general words: it is plain, by what has been said, *that general and universal* belong not to the real existence of things; but *are the inventions and creatures of the understanding*, made by it for its own use, *and concerns only signs*, whether words or *ideas*. Words are general, as has been said, when used for signs of general *ideas*; and so are applicable indifferently to many particular things; and *ideas* are general, when they are set up as the representatives of many particular things: but universality belongs not to things themselves, which are all of them particular in their existence, even those words, and *ideas*, which in their signification are general. When therefore we quit particulars, the generals that rest are only creatures of our own making, their general nature being nothing but the capacity they are put into by the understanding, of signifying or representing many particulars. For the signification they have, is nothing but a relation, that by the mind of man is added to them (a).

General and universal are creatures of the understanding.

§. 12.

(a) Against this the Bishop of Worcester objects, and our author * answers as followeth: ' *however, faith the Bishop, the abstracted ideas are the work of the mind, yet they are not mere creatures of the mind; as appears by an instance produced of the essence of the sun being in one single individual: in which case it is granted, That the idea may be so abstracted, that more suns might agree in it, and it is as much a sort, as if there were as many suns as there are stars. So that here we have a real essence subsisting in one individual, but capable of being multiplied into more, and the same essence remaining. But in this one sun there is a real essence, and not a mere nominal, or abstracted*

* In his first letter, p. 189, &c.

Abstract ideas
are the essences
of the genera
and species.

§. 12. The next thing therefore to be considered, is, *what kind of signification it is that general words have.* For, as it is evident that they do not signify barely one particular thing, for then they would not be general terms, but proper names; so, on the other side,
it

‘abstracted essence: but suppose there were more suns; would not each of them have the real essence of the sun? For what is it makes the second sun, but having the same real essence with the first? If it were but a nominal essence, then the second would have nothing but the name.’

This, as I understand it, replies Mr. *Locke*, is to prove that the abstract general essence of any sort of things, or things of the same denomination, *v. g.* of *man* or *marigold*, hath a *real being* out of the understanding; which, I confess, I am not able to conceive. Your lordship’s proof here brought out of my essay, concerning the sun, I humbly conceive, will not reach it; because what is said there, does not at all concern the *real* but *nominal* essence, as is evident from hence, that the *idea* I speak of there, is a *complex idea*; but we have no *complex idea* of the internal constitution or real essence of the sun. Besides, I say expressly, That our distinguishing substances into species, by names, is not at all founded on their real essences. So that the sun being one of these substances, I cannot, in the place quoted by your lordship, be supposed to mean, by *essence of the sun*, the real essence of the sun, unless I had so expressed it. But all this argument will be at an end, when your lordship shall have explained what you mean by these words, *true sun*. In my sense of them, any thing will be a *true sun* to which the name *sun* may be truly and properly applied, and to that substance or thing the name *sun* may be truly and properly applied, which has united in it that combination of sensible qualities, by which any thing else, that is called *sun*, is distinguished from other substances, *i. e.* by the *nominal essence*: and thus our sun is denominated and distinguished from a fixed star, not by a *real essence* that we do not know (for if we did, it is possible we should find the *real essence* or *constitution* of one of the fixed stars to be the same with that of our *sun*) but by a complex idea of sensible qualities co-existing, which, wherever they are found, *make a true sun*. And thus I crave leave to answer your lordship’s question: *for what is it makes the second sun to be a true sun, but having the same real essence with the first? If it were but a nominal essence, then the second would have nothing but the name.*

I humbly conceive, if it had the *nominal essence*, it would have something besides *the name*, viz. That nominal essence which is sufficient to denominate it truly a *sun*, or to make it be a *true sun*,
though

it is as evident they do not signify a plurality; for man and men would then signify the same, and the distinction of numbers (as Grammarians call them) would be superfluous and useless. That then which general words signify, is a sort of things; and each of them does that, by being a sign of an abstract *idea* in the mind, to which *idea* as things existing are found to agree, so they come to be ranked under that name; or, which is all one, be of that sort. Whereby it is evident, that the *essences of the sorts*, or (if the Latin word pleases better) *species* of things, are nothing else but

though we know nothing of that real essence whereon that nominal one depends. Your lordship will then argue, that that *real essence* is in the *second sun*, and makes the *second sun*. I grant it, when the *second sun* comes to exist, so as to be perceived by us to have all the ideas contained in our complex idea, *i. e.* in our *nominal essence* of a *sun*. For should it be true, (as is now believed by astronomers) that the real essence of the sun were in any of the fixed stars, yet such a star could not for that be by us called a *sun*, whilst it answers not our complex idea, or nominal essence of a *sun*. But how far that will prove, *that the essences of things, as they are knowable by us, have a reality in them* distinct from that of *abstract ideas* in the *mind*, which are *merely creatures of the mind*, I do not see; and we shall farther enquire, in considering your lordship's following words. *Therefore, say you, there must be a real essence in every individual of the same kind.* Yes, and I beg leave of your lordship to say, of a different *kind* too. *For that alone is it which makes it to be what it is.*

That every individual substance has real, internal, individual constitution, *i. e.* a real essence, that makes it to be what it is, I readily grant. Upon this your lordship says, *Peter, James and John*, are all true and real men. *Ans.* Without doubt, supposing them to be men, they are true and real men, *i. e.* supposing the name of that species belongs to them. And so three *bobaques* are all true and real *bobaques*, supposing the name of that species of animals belongs to them.

For I beseech your lordship to consider, whether in your way of arguing, by naming them, *Peter, James, and John*, names familiar to us, as appropriated to individuals of the species *man*, your lordship does not first suppose them men, and then very safely ask, whether they be not *all true and real men*? But if I should ask your lordship, whether *Weweena, Chuckery and Cousbeda*, were true and real men or no? Your lordship would not be able to tell me, till, I having pointed out to your lordship the individuals called by those

but these abstract *ideas*. For, the having essence of any species being that which makes any thing to be of that species, and the conformity to the *idea* to which the name is annexed being that which gives a right to that name, the having the essence, and the having that conformity, must needs be the same thing: since to be of any species, and to have a right to the name of that species, is all one. As for example, to be a *man*, or of the species *man*, and to have right to the name *man*, is the same thing. Again, to be a *man*, or of the species *man*, and have

names, your lordship, by examining whether they had in them those sensible qualities which your lordship has combined into that complex *idea* to which you give the specifick name *man*, determined them all, or some of them, to be the species which you call *man*, and so to be *true and real man*; which when your lordship has determined, it is plain you did it by that which is only the nominal essence, as not knowing the *real* one. But your lordship farther asks, *What it is makes Peter, James and John real men? Is it the attributing the general name to them? No certainly; but that the true and real essence of a man is in every one of them.*

If, when your lordship asks, *What makes them men?* your lordship used the word *making* in the proper sense for the efficient cause, and in that sense it were true, that the essence of a man, *i. e.* the specifick essence of that species made a man; it would undoubtedly follow, that this specifick essence had a reality beyond that of being only a general abstract idea in the mind. But when it is said, that it is *the true and real essence of a man in every one of them that makes Peter, James, and John true and real men*, the true and real meaning of these words is no more, but that the essence of that species, *i. e.* the properties answering the complex abstract idea to which the specifick name is given, being found in them, that makes them be properly and truly called men, or is the reason why they are called men. Your lordship adds, *and we must be as certain of this, as we are that they are men.*

How, I beseech your lordship, are we certain that they are *men*, but only by our senses, finding those properties in them which answer the abstract complex idea, which is in our minds, of the specifick idea to which were have annexed the specifick name *man*? This I take to be the true meaning of what your lordship says in the next words, *viz. They take their denomination of being men from that common nature or essence which is in them*; and I am apt to think, these words will not hold true in any other sense.

Your

have the essence of a *man*, is the same thing. Now, since nothing can be a *man*, or have a right to the name *man*, but what has a conformity to the abstract *idea* the name *man* stands for; nor any thing be a *man*, or have a right to the species *man*, but what has the essence of that species; it follows, that the abstract *idea* for which the name stands, and the essence of the species, is one and the same. From whence it is easy to observe, that the essences of the sorts of things, and consequently the sorting of things, is the workmanship of the understanding, that abstracts and makes those general *ideas*.

§. 13.

Your lordship's fourth inference begins thus; *That the general idea is not made from the simple ideas by the mere act of the mind abstracting from circumstances, but from reason and consideration of the nature of things.*

I thought, my lord, that *reason* and *consideration* had been *acts of the mind, mere acts of the mind*, when any thing was done by them. Your lordship gives a reason for it, *viz. For, when we see several individuals that have the same powers and properties, we thence infer, that there must be something common to all, which makes them of one kind.*

I grant the inference to be true; but must beg leave to deny that this proves, that the general idea the name is annexed to, is not made by the mind. I have said, and it agrees with what your lordship here says, * That 'the mind, in making its complex ideas of substances, only follows nature, and * B. 3. C. 6. ' puts no ideas together, which are not supposed to §. 28, 29. ' have an union in nature. Nobody joins the voice ' of a sheep with the shape of an horse; nor the colour of lead ' with the weight and fixedness of gold, to be the complex ideas ' of any real substances; unless he has a mind to fill his head with ' chimeras, and his discourses with unintelligible words. Men ' observing certain qualities always joined and existing together, ' therein copied nature, and of ideas so united, made their complex ' ones of substance, &c.' Which is very little different from what your lordship here says, that it is from our observation of individuals, that we come to infer, *that there is something common to them all.* But I do not see how it will thence follow, that the general or specifick idea is not made by the mere act of the mind. No, says your lordship, *There is something common to them all, which makes them of one kind; and if the difference of kinds be real, that which makes them all of one kind must not be a nominal, but real essence.*

They are the workmanship of the understanding, but have their foundations in the similitude of things.

§. 13. I would not here be thought to forget, much less to deny, that nature, in the production of things, makes several of them alike: there is nothing more obvious, especially in the races of animals, and all things propagated by feed. But yet, I think, we may say, the *sorting* of them under names *is the workmanship of the understanding, taking occasion from the similitude* it observes amongst them to make abstract general *ideas*, and set them up in the mind, with names annexed to them, as patterns or forms, (for in that sense the word *form* has a very proper

This may be some objection to the name of *nominal essence*; but *is*, as I humbly conceive, none to the thing designed by it. There is an internal constitution of things, on which their properties depend. This your lordship and I are agreed of, and this we call the *real essence*. There are also certain complex ideas, or combinations of these properties in men's minds, to which they commonly annex specific names, or names of sorts or *kinds* of things. This, I believe, your lordship does not deny. These complex ideas, for want of a better name, I have called *nominal essences*; how properly, I will not dispute. But if any one will help me to a better name for them, I am ready to receive it; till then, I must, to express myself, use this. Now, my lord, *body, life*, and the power of *reasoning*, being not the real essence of a man, as I believe your lordship will agree, will your lordship say, that they are not enough to make the thing wherein they are found, of the kind called *man*, and not of the kind called baboon, *because the difference of these kinds is real*? If this be not real enough to make *the thing of one kind and not of another*, I do not see how *animal rationale* can be enough really to distinguish a *man* from an *horse*; for that is but the nominal, not real essence of that kind, designed by the name *man*: and yet I suppose, every one thinks it *real* enough to make a *real difference* between that and other *kinds*. And if nothing will serve the turn, to MAKE things of *one kind and not of another* (which, as I have shewed, signifies no more but ranking of them under different specific names) but their real unknown constitutions, which are the *real essences* we are speaking of, I fear it would be a long while before we should have really different kinds of substances, or distinct names for them, unless we could distinguish them by these differences, of which we have no distinct conceptions. For I think it would not be readily answered me, if I should demand, wherein lies the *real difference* in the internal constitution of a *stag* from that

of

per signification,) to which as particular things existing are found to agree, so they come to be of that species, have that denomination, or are put into that *classis*. For, when we say this is a *man*, that a *horse*; this *justice*, that *cruelty*; this a *watch*, that a *jack*; what do we else but rank things under different specific names, as agreeing to those abstract *ideas*, of which we have made those names the signs? And what are the essences of those species, set out and marked by names, but those abstract *ideas* in the mind; which are, as it were, the bonds between particular things that

of a *buck*, which are each of them very well known to be of *one kind*, and not of the other; and nobody questions but that the *kinds*, whereof each of them is, are *really different*.

Your lordship farther says, *And this difference doth not depend upon the complex ideas of substances, whereby men arbitrarily join modes together in their minds*. I confess, my lord, I know not what to say to this, because I do not know what these complex ideas of substances are, *whereby* men arbitrarily join modes together in their minds. But I am apt to think there is a mistake in the matter, by the words that follow, which are these: *For let them mistake in their complication of ideas, either in leaving out or putting in what doth not belong to them; and let their ideas be what they please, the real essence of a man, and an horse, and a tree, are just what they were*.

The mistake I spoke of, I humbly suppose, is this, that things are here taken to be distinguished by their real essences; when, by the very way of speaking of them, it is clear, that they are already distinguished by their nominal essences, and are so taken to be. For what, I beseech your lordship, does your lordship mean, when you say, *The real essence of a man, and an horse, and a tree*, but that there are such kinds already set out by the signification of these names, *man, horse, tree*? And what, I beseech your lordship, is the signification of each of these specific names, but the complex idea it stands for? And that complex idea is the nominal essence, and nothing else. So that taking *man*, as your lordship does here, to stand for a kind or sort of individuals, all which agree in that common complex idea, which that specific name stands for, it is certain that the real essence of all the individuals comprehended under the specific name *man*, in your use of it, would be just the same; let others leave out or put into their complex idea of *man* what they please; because the real essence on which that unaltered complex idea, *i. e.* those properties depend, must necessarily be concluded to be the same.

that exist, and the names they are to be ranked under? And when general names have any connection with particular beings, these abstract *ideas* are the *medium* that unites them; so that the essences of species, as distinguished and denominated by us, neither are, nor can be any thing but those precise abstract *ideas* we have in our minds. And therefore the supposed real essences of substances, if different from our abstract *ideas*, cannot be the essences of the species we rank things into. For two species may be one, as rationally, as two different essences be the essence of one species:

For I take it for granted, that in using the name *man*, in this place, your lordship uses it for that complex idea which is in your lordship's mind of that species. So that your lordship, by putting it for, or substituting it in the place of that complex idea where you say the real essence of it is *just as it was*, or the very same it was, does suppose the idea it stands for to be steadily the same. For, if I change the signification of the word *man*, whereby it may not comprehend just the same individuals which in your lordship's sense it does, but shut out some of those that to your lordship are *men* in your signification of the word *man*, or take in others to which your lordship does not allow the name *man*; I do not think you will say, that the real essence of *man* in both these senses is the same. And yet your lordship seems to say so, when you say, *Let men mistake in the complication of their ideas, either in leaving out or putting in what doth not belong to them; and let their ideas be what they please, the real essence of the individuals comprehended under the names annexed to these ideas, will be the same: for so, I humbly conceive, it must be put, to make out what your lordship aims at.* For, as your lordship puts it by the name of *man*, or any other specifick name, your lordship seems to me to suppose, that that name stands for, and not for the same idea, at the same time.

For example, my lord, let your lordship's idea, to which you annex the sign *man*, be a rational animal: let another man's idea be a rational animal of such a shape; let a third man's idea be of an animal of such a size and shape, leaving out rationality; let a fourth's be an animal with a body of such a shape, and an immaterial substance, with a power of reasoning; let a fifth leave out of his idea an immaterial substance. It is plain every one of these will call his a *man*, as well as your lordship; and yet it is as plain that *man*, as standing for all these distinct, complex ideas, cannot be supposed to have the same internal constitution, *i. e.* the same *real essence*. The truth is, every distinct, abstract idea with a name to

species: and I demand, what are the alterations may, or may not be in a *horse*, or *lead*, without making either of them to be of another species? In determining the species of things by our abstract *ideas*, this is easy to resolve: but if any one will regulate himself herein by supposed real essences, he will, I suppose, be at a loss; and he will never be able to know when any thing precisely ceases to be of the species of a *horse*, or *lead*.

it, makes a real distinct kind, whatever the real essence (which we know not of any of them) be.

And therefore I grant it true what your lordship says in the next words, *And let the nominal essences differ never so much, the real common essence or nature of the several kinds, are not at all altered by them, i. e.* That our thoughts or ideas cannot alter the real constitutions that are in things that exist, there is nothing more certain. But yet it is true, that the change of ideas, to which we annex them, can and does alter the signification of their names, and thereby alter the kinds, which by these names we rank and sort them into. Your lordship farther adds, *And these real essences are unchangeable, i. e.* the internal constitutions are *unchangeable*. Of what, I beseech your lordship, are the *internal constitutions* unchangeable? Not of any thing that exists, but of God alone; for they may be changed all as easily by that hand that made them, as the internal frame of a watch. What then is it that is unchangeable? The internal constitution, or real essence of a species; which, in plain *English*, is no more but this, whilst the same specifick name, *v. g.* of *man*, *horse*, or *tree*, is annexed to, or made the sign of the same abstract complex idea, under which I rank several individuals; it is impossible but the real constitution on which that unaltered, complex idea, or nominal essence depends, must be the same, *i. e.* in other words, where we find all the same properties, we have reason to conclude there is the same real, internal constitution from which those properties flow.

But your lordship proves the real essences to be unchangeable, because God makes them, in these following words: *For, however there may happen some variety in individuals by particular accidents, yet the essences of men, and horses, and trees, remain always the same; because they do not depend on the ideas of men, but on the will of the Creator, who hath made several sorts of beings.*

It is true, the real constitutions or essences of particular things existing do not depend on the ideas of men, but on the will of the Creator; but their being ranked into sorts, under such and such names, does depend, and wholly depend, on the ideas of men.

Each distinct
abstract *idea* is
a distinct ef-
fence.

§. 14. Nor will any one wonder, that I say these *essences*, or abstract *ideas*, (which are the measures of name, and the boundaries of species) are *the workmanship of the understanding*, who considers, that at least the complex ones are often, in several men, different collections of simple *ideas*: and therefore that is *covetousness* to one man, which is not so to another. Nay, even in substances, where their abstract *ideas* seem to be taken from the things themselves, they are not constantly the same; no not in that species which is most familiar to us, and with which we have the most intimate acquaintance: it having been more than once doubted, whether the *fœtus* born of a woman were a *man*, even so far, as that it hath been debated, whether it were, or were not to be nourished and baptized: which could not be, if the abstract *idea* or essence, to which the name *man* belonged, were of nature's making; and were not the uncertain and various collection of simple *ideas*, which the understanding puts together, and then abstracting it, affixes a name to it. So that, in truth, *every distinct abstract idea is a distinct essence*; and the names that stand for such distinct *ideas* are the names of things essentially different. Thus a circle is as essentially different from an oval, as a sheep from a goat; and rain is as essentially different from snow, as water from earth; that abstract *idea* which is the essence of one, being impossible to be communicated to the other. And thus any two abstract *ideas*, that in any part vary one from another, with two distinct names annexed to them, constitute two distinct sorts, or, if you please, *species*, as essentially different as any two the most remote or opposite in the world.

Real and no-
minal essence.

§. 15. But, since the *essences* of things are thought by some (and not without reason) to be wholly unknown, it may not be amiss to consider the *several significations of the word essence*.

First, *Essence* may be taken for the being of any thing, whereby it is what it is. And thus the real internal, but generally, in substances, unknown constitution of things, whereon their discoverable qualities depend, may be called their *essence*. This is the proper original signification of the word, as is evident from the formation of it; *Essentia*, in its primary notation, signifying properly *being*. And in this sense it is still used, when we speak of the *essence* of particular things, without giving them any name.

Secondly, The learning and disputes of the schools having been much busied about *genus* and *species*, the word *essence* has almost lost its primary signification; and, instead of the real constitution of things, has been almost wholly applied to the artificial constitution of *genus* and *species*. It is true, there is ordinarily supposed a real constitution of the sorts of things; and it is past doubt, there must be some real constitution, on which any collection of simple *ideas* co-existing must depend. But it being evident, that things are ranked under names into sorts or *species*, only as they agree to certain abstract *ideas* to which we have annexed those names, the *essence* of each *genus*, or sort, comes to be nothing but that abstract *idea*, which the general, or *sortal* (if I may have leave so to call it from *sort*, as I do *general* from *genus*) name stands for. And this we shall find to be that which the word *essence* imports in its most familiar use. These two sorts of *essences*, I suppose, may not unfitly be termed, the one the *real*, the other the *nominal essence*.

§. 16. *Between the nominal essence, and the name*, there is so near a *connection*, that the name of any sort of things cannot be attributed to any particular being, but what has this *essence*, whereby it answers that abstract *idea*, whereof that name is the sign.

Constant connection between the name and nominal essence.

§. 17.

Supposition,
that species are
distinguished
by their real
essences use-
less.

§. 17. Concerning the real essences of corporeal substances (to mention those only) there are, if I mistake not, two opinions. The one is of those, who, using the word *essence* for they know not what, suppose a certain number of those essences, according to which all natural things are made, and wherein they do exactly every one of them partake, and so become of this or that *species*. The other, and more rational opinion, is of those, who look on all natural things to have a real, but unknown constitution of their insensible parts, from which flow those sensible qualities, which serve us to distinguish them one from another, according as we have occasion to rank them into sorts, under common denominations. The former of these opinions, which supposes these *essences* as a certain number of forms or molds, wherein all natural things that exist are cast, and do equally partake, has, I imagine, very much perplexed the knowledge of natural things. The frequent productions of monsters, in all the species of animals, and of changelings, and other strange issues of human birth, carry with them difficulties not possible to consist with this *hypothesis*: since it is as impossible, that two things partaking exactly of the same real *essence* should have different properties, as that two figures partaking in the same real *essence* of a circle should have different properties. But, were there no other reason against it, yet the *supposition of essences that cannot be known*, and the making them nevertheless to be that which distinguishes the species of things, is so *wholly useless*, and unserviceable to any part of our knowledge, that that alone were sufficient to make us lay it by, and content ourselves with such *essences* of the sorts or species of things, as come within the reach of our knowledge; which, when seriously considered, will be found, as I have said, to be nothing else but those abstract complex *ideas*, to which we have annexed distinct general names.

§. 18. *Essences* being thus distinguished into *nominal* and *real*, we may farther observe, that in the species of *simple ideas and modes* they are *always the same*; but in *substances* *always quite different*. Thus a figure including a space between three lines is the real as well as nominal *essence* of a triangle; it being not only the abstract *idea* to which the general name is annexed, but the very *essentia*, or being, of the thing itself, that foundation from which all its properties flow, and to which they are all inseparably annexed. But it is far otherwise concerning that parcel of matter which makes the ring on my finger, wherein these two *essences* are apparently different. For it is the real constitution of its insensible parts, on which depend all those properties of colour, weight, fusibility, fixedness, &c. which makes it to be *gold*, or gives it a right to that name, which is therefore its nominal *essence*: since nothing can be called *gold*, but what has a conformity of qualities to that abstract complex *idea*, to which that name is annexed. But this distinction of *essences* belonging particularly to substances, we shall, when we come to consider their names, have an occasion to treat of more fully.

Real and nominal essence, the same in simple ideas and modes, different in substances.

§. 19. That such *abstract ideas, with names to them*, as we have been speaking of, *are essences*, may farther appear by what we are told concerning *essences*, viz. that they are all ingenerable and incorruptible. Which cannot be true of the real constitutions of things, which begin and perish with them. All things that exist, besides their author, are all liable to change; especially those things we are acquainted with, and have ranked into bands, under distinct names or ensigns. Thus that which was grass to-day, is to-morrow the flesh of a sheep; and within a few days after becomes part of a man: in all which, and the like changes, it is evident, their real *essence*, i. e. that constitution whereon the properties of these several things depended, is destroyed, and perishes

Essences ingenerable and incorruptible.

with

with them. But *essences* being taken for *ideas* established in the mind, with names annexed to them, they are supposed to remain steadily the same whatever mutations the particular substances are liable to. For, whatever becomes of *Alexander* and *Bucephalus*, the *ideas* to which *man* and *horse* are annexed are supposed nevertheless to remain the same; and so the *essences* of those species are preserved whole and undestroyed, whatever changes happen to any, or all of the individuals of those *species*. By this means the *essence* of a *species* rests safe and intire, without the existence of so much as one individual of that kind. For, were there now no circle existing any where in the world (as perhaps that figure exists not any where exactly marked out,) yet the *idea* annexed to that name would not cease to be what it is; nor cease to be as a pattern, to determine which of the particular figures we meet with, have, or have not a right to the name *circle*, and so to shew which of them, by having that *essence*, was of that *species*. And though there neither were, nor had been in nature such a beast as an *unicorn*, nor such a fish as a *mermaid*; yet, supposing those names to stand for complex abstract *ideas* that contained no inconsistency in them, the *essence* of a *mermaid* is as intelligible as that of a *man*; and the *idea* of an *unicorn*, as certain, steady and permanent, as that of a *horse*. From what has been said, it is evident, that the doctrine of the immutability of *essences* proves them to be only abstract *ideas*; and is founded on the relation established between them, and certain sounds as signs of them, and will always be true, as long as the same name can have the same signification.

Recapitulation.

§. 20. To conclude; this is that which in short I would say, (*viz.*) That all the great business of *genera* and *species*, and their *essences*, amounts to no more but this, that men making abstract *ideas*, and settling them in their minds, with names annexed to them, do thereby enable themselves to consider things, and discourse of them, as it were in

in bundles, for the easier and readier improvement and communication of their knowledge, which would advance but slowly, were their words and thoughts confined only to particulars.

C H A P. IV.

Of the Names of Simple Ideas.

§. 1. **T**HOUGH all words, as I have shewn, signify nothing immediately but the *ideas* in the mind of the speaker, yet, upon a nearer survey, we shall find that the *names* of *simple ideas*, *mixed modes*, (under which I comprise relations too,) and *natural substances*, have each of them something peculiar, and different from the other. For example:

Names of simple ideas, modes and substances, have each something peculiar.

§. 2. *First*, The *names* of *simple ideas*, and *substances*, with the abstract *ideas* in the *mind* which they immediately signify, intimate also *some real existence*, from which was derived their original pattern. But the *names* of *mixed modes* terminate in the idea that is in the mind, and lead not the thoughts any farther, as we shall see more at large in the following chapter.

First, Names of simple ideas and substances intimate real existence.

§. 3. *Secondly*, The *names* of *simple ideas* and *modes* signify always the real as well as nominal essence of their species. But the *names* of *natural substances* signify rarely, if ever, any thing but barely the nominal essences of those species, as we shall shew in the chapter that treats of the names and substances in particular.

Secondly, Names of simple ideas and modes signify always both real and nominal essence.

§. 4. *Thirdly*, The *names* of *simple ideas* are not capable of any definitions; the names of all complex ideas are. It has not, that I know, been yet observed by any body, what words are, and what are not, capable of being defined:

Thirdly, Names of simple ideas undefinable.

defined: the want whereof is (as I am apt to think) not seldom the occasion of great wrangling and obscurity in men's discourses, whilst some demand definitions of terms that cannot be defined; and others think, they ought to rest satisfied in an explication made by a more general word, and its restriction, (or, to speak in terms of art, by a *genus* and *difference*,) when even after such definition, made according to rule, those who hear it have often no more a clear conception of the meaning of the word, than they had before. This at least I think, that the shewing what words are, and what are not capable of definition, and wherein consists a good definition, is not wholly besides our present purpose; and perhaps will afford so much light to the nature of these signs, and our *ideas*, as to deserve a more particular consideration.

If all were definable, it would be a process in infinitum.

§. 5. I will not here trouble myself, to prove that all terms are not definable, from that process in *infinitum*, which it will visibly lead us into, if we should allow that all names could be defined: for if the terms of one definition were still to be defined by another, where at last should we stop? But I shall, for the nature of our *ideas*, and the signification of our words, shew, *why some names can and others cannot be defined, and which they are.*

What a definition is.

§. 6. I think, it is agreed, that a *definition* is nothing else but *the shewing the meaning of one word by several other not synonymous terms.* The meaning of words being only the *ideas* they are made to stand for by him that uses them, the meaning of any term is then shewed, or the word is defined, when by other words the *idea* it is made the sign of, and annexed to, in the mind of the speaker, is as it were represented, or set before the view of another; and thus its signification ascertained. This is the only use and end of definitions; and therefore the only measure of what is, or is not a good definition.

§. 7. This being premised, I say, that *Simple ideas* the names of simple ideas, and those only, why undefinable. are incapable of being defined. The reason whereof is this, that, the several terms of a definition signifying several *ideas*, they can all together by no means represent an *idea*, which has no composition at all: and therefore a definition which is properly nothing but the shewing the meaning of one word by several others not signifying each the same thing, can in the names of simple *ideas* have no place.

§. 8. The not observing this difference *Instances; motion.* in our *ideas*, and their names, has produced that eminent trifling in the schools, which is so easy to be observed in the definitions they give us of some few of these simple *ideas*. For, as to the greatest part of them, even those masters of definitions were fain to leave them untouched, merely by the impossibility they found in it. What more exquisite *jargon* could the wit of man invent, than this definition, *The act of a being in power, as far forth as in power?* which would puzzle any rational man, to whom it was not already known by its famous absurdity, to guess what word it could ever be supposed to be the explication of. If Tully, asking a Dutchman what *beweeginge* was, should have received this explication in his own language, that it was *aëtus entis in potentia, quatenus in potentia*; I ask whether any one can imagine he could thereby have understood what the word *beweeginge* signified, or have guessed what *idea* a Dutchman ordinarily had in his mind, and would signify to another when he used that sound.

§. 9. Nor have the modern philosophers, who have endeavoured to throw off the *jargon* of the schools, and speak intelligibly, much better succeeded in defining simple *ideas*, whether by explaining their causes, or any otherwise. The *atomists*, who define motion to be a *passage from one place to another*, what do they more than put one synonymous word for another? For what is *passage* other than *motion*? And if they were asked

asked what *passage* was, how could they better define it than by *motion*? For is it not at least as proper and significant to say, *Passage is a motion from one place to another*, as to say, *motion is a passage*, &c. This is to translate, and not to define, when we change two words of the same signification one for another; which, when one is better understood than the other, may serve to discover what *idea* the unknown stands for; but is very far from a *definition*, unless we will say, every *English* word in the dictionary is the definition of the *Latin* word it answers, and that motion is the definition of *motus*. Nor will the successive application of the parts of the superficies of one body to those of another, which the *Cartesians* give us, prove a much better definition of motion, when well examined.

Light. §. 10. The act of perspicuous, as far forth as perspicuous, is another Peripatetick definition of a simple *idea*; which though not more absurd than the former of *motion*, yet betrays its uselessness and insignificancy more plainly, because experience will easily convince any one, that it cannot make the meaning of the word *light* (which it pretends to define) at all understood by a blind man: but the definition of *motion* appears not at first sight so useless, because it escapes this way of trial. For, this simple *idea* entering by the touch as well as sight, it is impossible to shew an example of any one, who has no other way to get the *idea* of *motion*, but barely by the definition of that name. Those who tell us, that *light* is a great number of little globules, striking briskly on the bottom of the eye, speak more intelligibly than the schools: but yet these words, ever so well understood, would make the *idea*, the word *light* stands for, no more known to a man that understands it not before, than if one should tell him, that *light* was nothing but a company of little tennis-balls, which fairies all day long struck with rackets against some men's foreheads; whilst they passed by others. For, granting this explication of the thing to be true, yet the
idea

idea of the cause of *light*, if we had it ever so exact, would no more give us the *idea* of *light* itself, as it is such a particular perception in us, than the *idea* of the figure and motion of a sharp piece of steel would give us the *idea* of that pain which it is able to cause in us. For the cause of any sensation, and the sensation itself, in all the simple *ideas* of one sense, are two *ideas*; and two *ideas* so different and distant one from another, that no two can be more so. And therefore, should *Des Cartes's* globules strike ever so long on the *retina* of a man who was blind by a *gutta serena*, he would thereby never have any *idea* of *light*, or any thing approaching to it, though he understood what little globules were, and what striking on another body was, ever so well. And therefore the *Cartesians* very well distinguish between that light which is the cause of that sensation in us, and the *idea* which is produced in us by it, and is that which is properly light.

§. 11. *Simple ideas*, as has been shewn, are only to be got by those *impressions* objects themselves make on our minds, by the proper inlets appointed to each sort. If they are not received this way, all the words in the world, made use of to explain or define any of their names, will never be able to produce in us the *idea* it stands for. For words being sounds, can produce in us no other simple *ideas* than of those very sounds; nor excite any in us, but by that voluntary connexion which is known to be between them, and those simple *ideas* which common use has made them signs of. He that thinks otherwise, let him try if any words can give him the taste of a pine-apple, and make him have the true *idea* of the relish of that celebrated delicious fruit. So far as he is told it has a resemblance with any tastes whereof he has the *ideas* already in his memory, imprinted there by sensible objects, not strangers to his palate, so far may he approach that resemblance in his mind. But this is not giving us that *idea* by a *definition*, but exciting in us other simple *ideas* by their known names; which will be still very

Simple ideas
why undefinable, farther explained.

different from the true taste of that fruit itself. In light and colours, and all other simple *ideas*, it is the same thing: for the signification of sounds is not natural, but only imposed and arbitrary. And no definition of *light*, or *redness*, is more fitted or able to produce either of those *ideas* in us, than the sound *light*, or *red*, by itself. For to hope to produce an *idea* of light, or colour, by a sound, however formed, is to expect that sounds should be visible, or colours audible; and to make the ears do the office of all the other senses. Which is all one as to say, that we might taste, smell, and see by the ears: a sort of philosophy worthy only of *Sanco Panca*, who had the faculty to see *Dulcinea* by hearsay. And therefore he that has not before received into his mind, by the proper inlet, the simple *idea* which any word stands for, can never come to know the signification of that word, by any other words or sounds whatsoever, put together according to any rules of definition. The only way is, by applying to his senses the proper object; and so producing that *idea* in him, for which he has learned the name already. A studious blind man, who had mightily beat his head about visible objects, and made use of the explication of his books and friends, to understand those names of light and colours, which often came in his way, bragged one day, that he now understood what *scarlet* signified. Upon which his friend demanding, what *scarlet* was? the blind man answered, it was like the sound of a trumpet. Just such an understanding of the name of any other simple *idea* will he have, who hopes to get it only from a definition, or other words made use of to explain it.

The contrary
shewed in
complex *ideas*,
by instances of
a statue and
rainbow.

§. 12. The case is quite otherwise in *complex ideas*; which consisting of several simple ones, it is in the power of words, standing for the several *ideas* that make that composition, to imprint *complex ideas* in the mind, which were never there before, and so make their names be understood. In such collections of *ideas*, passing under one name, *definition*,

definition, or the teaching the signification of one word by several others, has place, and *may make us understand the names* of things which never came within the reach of our senses; and frame *ideas* suitable to those in other men's minds, when they use those names: provided that none of the terms of the definition stand for any such simple *ideas*, which he, to whom the explication is made, has never yet had in his thought. Thus the word *statue* may be explained to a blind man by other words, when picture cannot, his senses having given him the *idea* of figure, but not of colours, which therefore words cannot excite in him. This gained the prize to the painter, against the statuary; each of which contending for the excellency of his art, and the statuary bragging that his was to be preferred, because it reached farther, and even those who had lost their eyes could yet perceive the excellency of it; the painter agreed to refer himself to the judgment of a blind man; who being brought where there was a statue made by the one, and a picture drawn by the other, he was first led to the statue, (in which he traced with his hands all the lineaments of the face and body,) and with great admiration applauded the skill of the workman: but being led to the picture, and having his hand laid upon it, was told, that now he touched the head, and then the forehead, eyes, nose, &c. as his hand moved over the parts of the picture on the cloth, without finding any the least distinction: whereupon he cried out, that certainly that must needs be a very admirable and divine piece of workmanship, which could represent to them all those parts, where he could neither feel nor perceive any thing.

§. 13. He that should use the word *rainbow* to one who knew all those colours, but yet had never seen that *phenomenon*, would, by enumerating the figure, largeness, position, and order of the colours, so well define that word, that it might be perfectly understood. But yet that *definition*, how exact and perfect soever, would never make a blind man understand it; because several of the simple *ideas* that make that com-

plex one, being such as he never received by sensation and experience, no words are able to excite them in his mind.

The names of complex *ideas* when to be made intelligible by words.

§. 14. Simple *ideas*, as has been shewed, can only be got by experience, from those objects which are proper to produce in us those perceptions. When by this means we have our minds stored with them, and know the names for them, then *we are in a condition to define*, and by *definition* to understand the names of complex *ideas*, that are made up of them. But, when any term stands for a simple *idea* that a man has never yet had in his mind, it is impossible by any words to make known its meaning to him. When any term stands for an *idea* a man is acquainted with, but is ignorant that that term is the sign of it, there another name of the same *idea*, which he has been accustomed to, may make him understand its meaning. But in no case whatsoever is any name of any simple *idea* capable of a *definition*.

Fourthly, names of simple *ideas* least doubtful.

§. 15. *Fourthly*, But though the names of *simple ideas* have not the help of *definition* to determine their signification; yet that hinders not, but that they are *generally less doubtful and uncertain, than those of mixed modes and substances*: because, they standing only for one simple perception, men for the most part, easily and perfectly agree in their signification; and there is little room for mistake and wrangling about their meaning. He that knows once that whiteness is the name of that colour he has observed in snow or milk, will not be apt to misapply that word, as long as he retains that *idea*; which when he has quite lost, he is not apt to mistake the meaning of it, but perceives he understands it not. There is neither a multiplicity of simple *ideas* to be put together, which makes the doubtfulness in the names of mixed modes; nor a supposed, but an unknown real essence, with properties depending thereon, the precise number whereof are also unknown, which makes the difficulty in the names of substances.

substances. But, on the contrary, in simple *ideas* the whole signification of the name is known at once, and consists not of parts, whereof more or less being put in, the *idea* may be varied, and so the signification of its name be obscure or uncertain.

§. 16. *Fifthly*, This farther may be observed concerning *simple ideas* and their names, that they *have but few ascents in linea prædicamentali*, (as they call it) *from the lowest species to the summum genus*. The

Fifthly, simple ideas have few ascents in linea prædicamentali.

reason whereof is, that the lowest species being but one simple *idea*, nothing can be left out of it, that so the difference being taken away, it may agree with some other thing in one *idea* common to them both; which having one name is the *genus* of the other two: *v. g.* There is nothing can be left out of the *idea* of white and red, to make them agree in one common appearance, and so have one general name; as *rationality* being left out of the complex *idea* of *man*, makes it agree with brute, in the more general *idea* and name of *animal*. And therefore, when, to avoid unpleasant enumerations, men would comprehend both *white* and *red*, and several other such simple *ideas*, under one general name, they have been fain to do it by a word which denotes only the way they get into the mind. For when *white*, *red*, and *yellow*, are all comprehended under the *genus* or name *colour*, it signifies no more, but such *ideas* as are produced in the mind only by the sight, and have entrance only through the eyes. And when they would frame yet a more general term, to comprehend both *colours* and *sounds*, and the like simple *ideas*, they do it by a word that signifies all such as come into the mind only by one sense: and so the general term *quality*, in its ordinary acceptation, comprehends colours, sounds, tastes, smells, and tangible qualities, with distinction from extension, number, motion, pleasure, and pain, which make impressions on the mind, and introduce their *ideas* by more senses than one.

Sixthly, names of simple *ideas* stand for *ideas* not at all arbitrary.

§. 17. *Sixthly*, The names of simple *ideas*, substances, and mixed modes, have also this difference: that those of *mixed modes* stand for *ideas* perfectly arbitrary: those of *substances* are not perfectly so; but refer to a pattern, though with some latitude: and those of *simple ideas* are perfectly taken from the existence of things, and are not arbitrary at all. Which what difference it makes in the significations of their names, we shall see in the following chapters.

The names of simple modes differ little from those of simple *ideas*.

C H A P. V.

Of the Names of mixed Modes and Relations.

They stand for abstract *ideas*, as other general names.

§. 1. **T**HE names of mixed modes being general, they stand, as has been shewn, for sorts or species of things, each of which has its peculiar essence.

The essences of these species also, as has been shewed, are nothing but the abstract *ideas* in the mind, to which the name is annexed. Thus far the names and essences of mixed modes have nothing but what is common to them with other *ideas*: but, if we take a little nearer survey of them, we shall find that they have something peculiar, which perhaps may deserve our attention.

First, the *ideas* they stand for are made by the understanding.

§. 2. The first particularity I shall observe in them is, that the abstract *ideas*, or, if you please, the essences of the several species of *mixed modes*, are made by the understanding, wherein they differ from those of simple *ideas*: in which sort, the mind has no power to make any one, but only receives such as are presented to it, by the real existence of things operating upon it.

§. 3.

§. 3. In the next place, these *essences of the species of mixed modes* are not only made by the mind, but made *very arbitrarily*, made without patterns, or reference

Secondly, made arbitrarily, and without patterns.

to any real existence. Wherein they differ from those of substances, which carry with them the supposition of some real being, from which they are taken, and to which they are conformable. But, in its complex *ideas* of mixed modes, the mind takes a liberty not to follow the existence of things exactly. It unites and retains certain collections, as so many distinct specifick *ideas*, whilst others, that as often occur in nature, and are as plainly suggested by outward things, pass neglected without particular names or specifications. Nor does the mind, in these of mixed modes, as in the complex *ideas* of substances, examine them by the real existence of things; or verify them by patterns, containing such peculiar compositions in nature. To know whether his *idea* of *adultery*, or *incest*, be right, will a man seek it any where amongst things existing? Or is it true, because any one has been witness to such an action? No: but it suffices here, that men have put together such a collection into one complex *idea*, that makes the *archetype*, and specifick *idea*, whether ever any such action were committed in *rerum natura* or no.

§. 4. To understand this aright, we must consider *wherein this making of these complex ideas consists*; and that is not in the

How this is done.

making any new *idea*, but putting together those which the mind had before. Wherein the mind does these three things: first, it chuses a certain number. Secondly, it gives them connection, and makes them into one *idea*. Thirdly, it ties them together by a name. If we examine how the mind proceeds in these, and what liberty it takes in them, we shall easily observe, how these *essences of the species of mixed modes* are the workmanship of the mind; and consequently, that the *species themselves* are of men's making.

Evidently arbitrary, in that the *idea* is often before the existence.

§. 5. Nobody can doubt, but that these *ideas* of mixed modes are made by a voluntary collection of *ideas* put together in the mind, independent from any original patterns in nature, who will but reflect, that this sort of complex *ideas* may be made, abstracted, and have names given them, and so a species be constituted, before any one individual of that species ever existed. Who can doubt but the *ideas* of *sacrilege* or *adultery* might be framed in the mind of men, and have names given them, and so these species of mixed modes be constituted, before either of them was ever committed; and might be as well discoursed of, and reasoned about, and as certain truths discovered of them, whilst yet they had no being but in the understanding, as well as now, that they have but too frequently a real existence? Whereby it is plain, how much *the sorts of mixed modes are the creatures of the understanding*, where they have a being as subservient to all the ends of real truth and knowledge, as when they really exist: and we cannot doubt, but law-makers have often made laws about species of actions, which were only the creatures of their own understandings: beings that had no other existence, but in their own minds. And, I think, nobody can deny, but that the *resurrection* was a species of mixed modes in the mind, before it really existed.

Instances;
murder, incest, stabbing.

§. 6. To see how arbitrarily these essences of mixed modes are made by the mind, we need but take a view of almost any of them. A little looking into them will satisfy us, that it is the mind that combines several scattered independent *ideas* into one complex one; and, by the common name it gives them, makes them the essence of a certain species, without regulating itself by any connexion they have in nature. For what greater connexion in nature has the *idea* of a man, than the *idea* of a sheep, with killing; that this is made a particular species of action, signified by the word

word *murder*, and the other not? Or what nearer union is there in nature between the *idea* of the relation of a father with killing, than that of a son, or neighbour; that those are combined into one complex *idea*, and thereby made the essence of the distinct species *parricide*, whilst the other makes no distinct species at all? But though they have made killing a man's father or mother a distinct species from killing his son, or daughter; yet, in some other cases, son and daughter are taken in too, as well as father and mother; and they are all equally comprehended in the same species, as in that of *incest*. Thus the mind in mixed modes arbitrarily unites into complex *ideas* such as it finds convenient; whilst others, that have altogether as much union in nature, are left loose, and never combined into one *idea*, because they have no need of one name. It is evident then, that the mind, by its free choice, gives a connexion to a certain number of *ideas*, which in nature have no more union with one another, than others that it leaves out: why else is the part of the weapon, the beginning of the wound is made with, taken notice of, to make the distinct species called *stabbing*, and the figure and matter of the weapon left out? I do not say this is done without reason, as we shall see more by and by; but this I say, that it is done by the free choice of the mind, pursuing its own ends; and that therefore these species of mixed modes are the workmanship of the understanding: and there is nothing more evident than that, for the most part, in the framing these *ideas*, the mind searches not its patterns in nature, nor refers the *ideas* it makes to the real existence of things; but puts such together as may best serve its own purposes, without tying itself to a precise imitation of any thing that really exists.

§. 7. But though these complex *ideas*, or *essences of mixed modes*, depend on the mind, and are made by it with great liberty; yet they are not made at random, and jumbled together without any reason at all.

But still subservient to the end of language.

Though

Though these complex *ideas* be not always copied from nature, yet they are always suited to the end for which abstract *ideas* are made: and though they be combinations made of *ideas*, that are loose enough, and have as little union in themselves, as several other to which the mind never gives a connexion that combines them into one *idea*; yet they are always made for the convenience of communication, which is the chief end of language. The use of language is, by short sounds to signify with ease and dispatch general conceptions; wherein not only abundance of particulars may be contained, but also a great variety of independent *ideas* collected into one complex one. In the making therefore of the species of mixed modes, men have had regard only to such combinations as they had occasion to mention one to another. Those they have combined into distinct complex *ideas*, and given names to; whilst others, that in nature have as near an union, are left loose and unregarded. For, to go no farther than human actions themselves, if they would make distinct abstract *ideas* of all the varieties might be observed in them, the number must be infinite, and the memory confounded with the plenty, as well as over-charged to little purpose. It suffices, that men make and name so many complex *ideas* of these mixed modes, as they find they have occasion to have names for, in the ordinary occurrence of their affairs. If they join to the *idea* of killing, the *idea* of father or mother, and so make a distinct species from killing a man's son, or neighbour, it is because of the different heinousness of the crime, and the distinct punishment is due to the murdering a man's father or mother, different from what ought to be inflicted on the murder of a son or neighbour; and therefore they find it necessary to mention it by a distinct name, which is the end of making that distinct combination. But though the *ideas* of mother and daughter are so differently treated, in reference to the *idea* of killing, that the one is joined with it to make a distinct abstract *idea* with a name,
and

and so a distinct species, and the other not; yet, in respect of carnal knowledge, they are both taken in under *incest*: and that still for the same convenience of expressing under one name, and reckoning of one species, such unclean mixtures as have a peculiar turpitude beyond others; and this to avoid circumlocutions, and tedious descriptions.

§. 8. A moderate skill in different languages will easily satisfy one of the truth of this, it being so obvious to observe great store of words in one language, which have not any that answer them in another. Which plainly shews, that those of one country, by their customs and manner of life, have found occasion to make several complex ideas, and give names to them, which others never collected into specifick ideas. This could not have happened, if these species were the steady workmanship of nature; and not collections made and abstracted by the mind, in order to naming, and for the convenience of communication. The terms of our law, which are not empty sounds, will hardly find words that answer them in the *Spanish* or *Italian*, no scanty languages; much less, I think, could any one translate them into the *Carribbee*, or *Westoe* tongues: and the *Versura* of the *Romans*, or *Corban* of the *Jews*, have no words in other languages to answer them: the reason whereof is plain, from what has been said. Nay, if we will look a little more nearly into this matter, and exactly compare different languages, we shall find, that though they have words, which in translations and dictionaries are supposed to answer one another; yet there is scarce one of ten, amongst the names of complex ideas, especially of mixed modes, that stands for the same precise idea, which the word does that in dictionaries it is rendered by. There are no ideas more common, and less compounded, than the measures of time, extension, and weight; and the *Latin* names *hora*, *pes*, *libra*, are without difficulty rendered by the *English* names, *hour*, *foot*, and *pound*:
but

Whereof the intranslatable words of diverse languages are a proof.

but yet there is nothing more evident, than that the *ideas* a *Roman* annexed to these *Latin* names, were very far different from those which an *Englishman* expresses by those *English* ones. And if either of these should make use of the measures that those of the other language designed by their names, he would be quite out in his account. These are too sensible proofs to be doubted; and we shall find this much more so, in the names of more abstract and compounded *ideas*; such as are the greatest part of those which make up moral discourses: whose names when men come curiously to compare with those they are translated into in other languages, they will find very few of them exactly to correspond in the whole extent of their significations.

This shews
species to be
made for com-
munication.

§. 9. The reason why I take so particular notice of this, is, that we may not be mistaken about *genera*, and *species*, and their *essences*, as if they were things regularly and constantly made by nature, and had a real existence in things; when they appear, upon a more wary survey, to be nothing else but an artifice of the understanding, for the easier signifying such collections of *ideas*, as it should often have occasion to communicate by one general term; under which diverse particulars, as far forth as they agree to that abstract *idea*, might be comprehended. And if the doubtful signification of the word *species*, may make it sound harsh to some, that I say, that the *species* of mixed modes are made by the understanding; yet I think, it can by nobody be denied, that it is the mind makes those abstract complex *ideas*, to which specifick names are given. And if it be true, as it is, that the mind makes the patterns for sorting and naming of things, I leave it to be considered, who makes the boundaries of the sort or *species*; since, with me, *species* and *sort* have no other difference than that of a *Latin* and *English idiom*.

§. 10.

§. 10. *The near relation that there is between species, essences, and their general name, at least in mixed modes, will farther appear, when we consider, that it is the name that seems to preserve those essences, and give them their lasting duration. For,*

In mixed modes, it is the name that ties the combination together, and makes it a species.

the connexion between the loose parts of those complex ideas being made by the mind, this union, which has no particular foundation in nature, would cease again, were there not something that did, as it were, hold it together, and keep the parts from scattering. Though therefore it be the mind that makes the collection, it is the name which is, as it were, the knot that ties them fast together. What a vast variety of different ideas does the word triumphus hold together, and deliver to us as one species? Had this name been never made, or quite lost, we might, no doubt, have had descriptions of what passed in that solemnity: but yet, I think, that which holds those different parts together, in the unity of one complex idea, is that very word annexed to it; without which, the several parts of that would no more be thought to make one thing, than any other shew, which having never been made but once, had never been united into one complex idea, under one denomination. How much therefore, in mixed modes, the unity necessary to any essence depends on the mind; and how much the continuation and fixing of that unity depends on the name in common use annexed to it, I leave to be considered by those who look upon essences and species as real established things in nature.

§. 11. *Suitable to this we find, that men, speaking of mixed mode, seldom imagine or take any other for species of them, but such as are set out by name: because they being of man's making only in order to naming, no such species are taken notice of, or supposed to be, unless a name be joined to it as the sign of man's having combined into one idea several loose ones; and by that name giving a lasting union to the parts, which*
would

would otherwise cease to have any, as soon as the mind laid by that abstract *idea*, and ceased actually to think on it. But when a name is once annexed to it, wherein the parts of that complex *idea* have a settled and permanent union; then is the *essence*, as it were, established, and the *species* looked on as compleat. For to what purpose should the memory charge itself with such compositions, unless it were by abstraction to make them general? and to what purpose make them general, unless it were, that they might have general *names*, for the convenience of discourse and communication? Thus we see, that killing a man with a sword, or a hatchet, are looked on as no distinct species of action: but if the point of the sword first enter the body, it passes for a distinct *species*, where it has a distinct *name*, as in *England*, in whose language it is called *stabbing*: but in another country, where it has not happened to be specified under a peculiar *name*, it passes not for a distinct *species*. But in the *species* of corporeal substances, though it be the mind that makes the nominal essence; yet since those *ideas*, which are combined in it, are supposed to have an union in nature, whether the mind joins them or no, therefore those are looked on as distinct *species*, without any operation of the mind, either abstracting, or giving a *name* to that complex *idea*.

For the originals of mixed modes, we look no farther than the mind, which also shews them to be the workmanship of the understanding.

§. 12. Conformable also to what has been said concerning the *essence* of the *species* of *mixed modes*, that they are creatures of the understanding, rather than the works of nature: conformable, I say, to this, we find, that *their names lead our thoughts to the mind, and no farther*. When we speak of *justice*, or *gratitude*, we frame to ourselves no imagination of any thing existing, which we would conceive; but our thoughts terminate in the abstract *ideas* of those virtues, and look no farther; as they do, when we speak of a *horse*, or *iron*, whose specifick *ideas* we consider not as barely in the mind,

mind, but as in things themselves, which afford the original patterns of those *ideas*. But in mixed modes, at least the most considerable parts of them, which are moral beings, we consider the original patterns, as being in the mind; and to those we refer for the distinguishing of particular beings under names. And hence I think it is, that these *essences* of the *species* of mixed modes are by a more particular name called *notions*; as by a peculiar right appertaining to the understanding.

§. 13. Hence likewise we may learn, *Why the complex ideas of mixed modes are commonly more compounded and decomposed, than those of natural substances*: because they being the workmanship of the understanding, pursuing only its own ends, and the conveniency of expressing in short

Their being made by the understanding without patterns, shews the reason why they are so compounded.

those *ideas* it would make known to another, it does with great liberty unite often into one abstract *idea* things that in their nature have no coherence; and so under one term bundle together a great variety of compounded and decomposed *ideas*. Thus the name of *procession*, what a great mixture of independent *ideas* of persons, habits, tapers, orders, motions, sounds, does it contain in that complex one, which the mind of man has arbitrarily put together, to express by that one name? Whereas the complex *ideas* of the sorts of substances are usually made up of only a small number of simple ones; and in the *species* of animals, these two, *viz.* shape and voice, commonly make the whole nominal essence.

§. 14. Another thing we may observe from what has been said, is, that *the names of mixed modes always signify* (when they have any determined signification) *the real essences of their species*. For, these abstract

Names of mixed modes stand always for their real essences.

ideas being the workmanship of the mind, and not referred to the real existence of things, there is no supposition of any thing more signified by that name,
but

but barely that complex *idea* the mind itself has formed, which is all it would have expressed by it; and is that on which all the properties of the *species* depend, and from which alone they all flow: and so in these the *real* and *nominal essence* is the same; which, of what concernment it is to the certain knowledge of general truth, we shall see hereafter.

Why their
names are usu-
ally got before
their *ideas*.

§. 15. This also may shew us the reason, *why for the most part the names of mixed modes are got, before the ideas they stand for are perfectly known.* Because there being no *species* of these ordinarily taken notice of, but what have names; and those *species*, or rather their essences, being abstract complex *ideas* made arbitrarily by the mind, it is convenient, if not necessary, to know the names, before one endeavour to frame these complex *ideas*: unless a man will fill his head with a company of abstract complex *ideas*, which others having no names for, he has nothing to do with, but to lay by and forget again. I confess, that in the beginning of languages, it was necessary to have the *idea*, before one gave it the name: and so it is still, where making a new complex *idea*, one also, by giving it a new name, makes a new word. But this concerns not languages made, which have generally pretty well provided for *ideas*, which men have frequent occasion to have, and communicate: and in such, I ask whether it be not the ordinary method, that children learn the names of mixed modes, before they have their *ideas*? What one of a thousand ever frames the abstract *idea* of *glory* and *ambition* before he has heard the names of them? In simple *ideas* and substances I grant it is otherwise; which being such *ideas*, as have a real existence and union in nature, the *ideas* or names, are got one before the other, as it happens.

Reason of my
being so large
on this subject.

§. 16. What has been said here of mixed modes, is with very little difference applicable also to relations; which since every man himself may observe, I may spare myself the pains

pains to enlarge on : especially, since what I have here said concerning words in this third book, will possibly be thought by some to be much more than what so slight a subject required. I allow it might be brought into a narrower compass : but I was willing to stay my reader on an argument, that appears to me new, and a little out of the way, (I am sure it is one I thought not of, when I began to write,) That by searching it to the bottom, and turning in on every side, some part or other might meet with every one's thoughts, and give occasion to the most averse or negligent, to reflect on a general miscarriage ; which, though of great consequence, is little taken notice of. When it is considered, what a pother is made about *essences*, and how much all sorts of knowledge, discourse, and conversation, are pestered and disordered by the careless and confused use and application of words, it will perhaps be thought worth while thoroughly to lay it open. And I shall be pardoned if I have dwelt long on an argument, which I think therefore needs to be inculcated ; because the faults men are usually guilty of in this kind, are not only the greatest hindrances of true knowledge, but are so well thought of, as to pass for it. Men would often see what a small pittance of reason and truth, or possibly none at all, is mixed with those huffing opinions they are swelled with ; if they would but look beyond fashionable sounds, and observe what *ideas* are, or are not comprehended under those words, with which they are so armed at all points, and with which they so confidently lay about them. I shall imagine I have done some service to truth, peace, and learning, if, by any enlargement on this subject, I can make men reflect on their own use of language ; and give them reason to suspect, that since it is frequent for others, it may also be possible for them to have sometimes very good and approved words in their mouths, and writings, with very uncertain, little, or no signification. And therefore it is not unreasonable for them to be wary herein themselves, and not to be

unwilling to have them examined by others. With this design therefore, I shall go on, with what I have farther to say, concerning this matter.

CHAP. VI.

Of the Names of Substances.

The common names of substances stand for sorts.

§. 1. *THE common names of substances,* as well as other general terms, *stand for sorts*; which is nothing else but the being made signs of such complex *ideas*, wherein several particular substances do, or might agree, by virtue of which they are capable of being comprehended in one common conception, and signified by one name. I say, do or might agree: for though there be but one sun existing in the world, yet the *idea* of it being abstracted, so that more substances (if there were several) might each agree in it; it is as much a sort, as if there were as many suns as there are stars. They want not their reasons, who think there are, and that each fixed star would answer the *idea* the name *sun* stands for, to one who were placed in a due distance; which, by the way, may shew us how much the sorts, or, if you please, *genera* and *species* of things (for those Latin terms signify to me no more than the *English* word *sort*) depend on such collections of *ideas* as men have made, and not on the real nature of things: since it is not impossible, but that, in propriety of speech, that might be a sun to one, which is a star to another.

The essence of each sort is the abstract *idea*.

§. 2. The measure and boundary of each sort, or *species*, whereby it is constituted that particular sort, and distinguished from others, is that we call its *essence*, which is nothing but that *abstract idea to which the name is annexed*: so that every thing contained in that *idea* is essential to that sort. This, though it be all the *essence* of

of natural substances that we know, or by which we distinguish them into sorts; yet I call it by a peculiar name, the *nominal essence*, to distinguish it from that real constitution of substances, upon which depends this *nominal essence* and all the properties of that sort; which therefore, as has been said, may be called the *real essence*: v. g. the *nominal essence* of *gold* is that complex *idea* the word *gold* stands for, let it be, for instance, a body yellow, of a certain weight, malleable, fusible and fixed. But the *real essence* is the constitution of the insensible parts of that body, on which those qualities, and all the other properties of *gold*, depend. How far these two are different, though they are both called *essence*, is obvious, at first sight, to discover.

§. 3. For though, perhaps, voluntary motion, with sense and reason, joined to a body of a certain shape, be the complex *idea*, to which I, and others, annex the name *man*, and so be the *nominal essence* of the *species* so called; yet nobody will say, that that complex *idea* is the *real essence* and source of all those operations, which are to be found in any individual of that sort. The foundation of all those qualities, which are the ingredients of our complex *idea*, is something quite different: and had we such a knowledge of that constitution of *man*, from which his faculties of moving, sensation, and reasoning, and other powers flow, and on which his so regular shape depends, as it is possible angels have, and it is certain his Maker has, we should have a quite other *idea* of his *essence*, than what now is contained in our definition of that *species*, be it what it will: and our *idea* of any individual *man* would be as far different from what it now is, as is his who knows all the springs and wheels, and other contrivances within, of the famous clock at *Straßburg*, from that which a gazing countryman has of it, who barely sees the motion of the hand, and hears the clock strike, and observes only some of the outward appearances.

The nominal
and real ef-
sence dif-
ferent.

Nothing essential to individuals.

§. 4. That *essence*, in the ordinary use of the word, relates to *sorts*, and that it is considered in particular beings no farther than as they are ranked into *sorts*, appears from hence: that take but away the abstract *ideas*, by which we sort individuals, and rank them under common names, and then the thought of any thing *essential* to any of them instantly vanishes: we have no notion of the one without the other: which plainly shew their relation. It is necessary for me to be as I am; GOD and nature has made me so: but there is nothing I have is essential to me. An accident, or disease, may very much alter my colour, or shape; a fever, or fall, may take away my reason or memory, or both; and an apoplexy leave neither sense, nor understanding, no, nor life. Other creatures of my shape may be made with more and better, or fewer and worse faculties, than I have: and others may have reason and sense in a shape and body very different from mine. None of these are essential to the one, or the other, or to any individual whatsoever, till the mind refers it to some sort or *species* of things; and then presently, according to the abstract *idea* of that sort, something is found *essential*. Let any one examine his own thoughts, and he will find, that, as soon as he supposes or speaks of *essential*, the consideration of some *species*, or the complex *idea* signified by some general name, comes into his mind: and it is in reference to that, that this or that quality is said to be *essential*. So that if it be asked, whether it be *essential* to me, or any other particular corporeal being, to have reason? I say, no; no more than it is *essential* to this white thing I write on, to have words in it. But if that particular being be to be counted of the sort *man*, and to have the name *man* given it, then reason is *essential* to it, supposing reason to be a part of the complex *idea* the name *man* stands for: as it is *essential* to this thing I write on to contain words, if I will give it the name *treatise*, and rank it under that *species*. So that *essential*,
and

and not *essential*, relate only to our *abstract ideas*, and the names annexed to them; which amounts to no more but this, that whatever particular thing has not in it those qualities which are contained in the *abstract idea* which any general term stands for, cannot be ranked under that *species*, nor be called by that name, since that *abstract idea* is the very *essence* of that *species*.

§. 5. Thus, if the *idea* of *body*, with some people, be bare extension of space, then solidity is not *essential* to body: if others make the *idea*, to which they give the name *body*, to be solidity and extension, then solidity is *essential* to *body*. That therefore, and *that alone*, is considered as *essential*, which makes a part of the complex *idea* the name of a sort stands for, without which no particular thing can be reckoned of that sort, nor be entitled to that name. Should there be found a parcel of matter, that had all the other qualities that are in *iron*, but wanted obedience to the loadstone; and would neither be drawn by it, nor receive direction from it, would any one question, whether it wanted any thing *essential*? It would be absurd to ask, whether a thing really existing wanted any thing *essential* to it: or could it be demanded, whether this made an *essential* or *specifick* difference or no; since we have no other measure of *essential* or *specifick* but our *abstract ideas*? And to talk of *specifick* differences in nature, without reference to general *ideas* and names, is to talk unintelligibly. For I would ask any one, what is sufficient to make an *essential* difference in nature between any two particular beings, without any regard had to some *abstract idea*, which is looked upon as the essence and standard of a *species*? All such patterns and standards being quite laid aside, particular beings, considered barely in themselves, will be found to have all their qualities equally *essential*; and every thing, in each individual, will be *essential* to it, or, which is more, nothing at all. For though it may be reasonable to ask, whether obeying the magnet be *essential* to *iron*? yet, I think, it is very improper and insignificant to

ask, whether it be *essential* to the particular parcel of matter I cut my pen with, without considering it under the name *iron*, or as being of a certain *species*? And if, as has been said, our abstract *ideas*, which have names annexed to them, are the boundaries of *species*, nothing can be *essential* but what is contained in those *ideas*.

§. 6. It is true, I have often mentioned a *real essence*, distinct in substances, from those abstract *ideas* of them, which I call their *nominal essence*. By this *real essence*, I mean that real constitution of any thing, which is the foundation of all those properties, that are combined in, and are constantly found to co exist with the *nominal essence*; that particular constitution which every thing has within itself, without any relation to any thing without it. But *essence*, even in this sense, *relates to a sort*, and supposes a *species*: for being that real constitution, on which the properties depend, it necessarily supposes a sort of things, properties belonging only to species, and not to individuals; v. g. supposing the nominal essence of *gold* to be a body of such a peculiar colour and weight, with malleability and fusibility, the *real essence* is that constitution of the parts of matter, on which these qualities, and their union, depend; and is also the foundation of its solubility in *aqua regia*, and other properties accompanying that complex *idea*. Here are *essences* and *properties*, but all upon supposition of a sort, or general abstract *idea*, which is considered as immutable; but there is no individual parcel of matter, to which any of these qualities are so annexed, as to be *essential* to it, or inseparable from it. That which is *essential*, belongs to it as a condition, whereby it is of this or that sort: but take away the consideration of its being ranked under the name of some abstract *idea*, and then there is nothing necessary to it, nothing inseparable from it. Indeed as to the *real essences* of substances, we only suppose their being, without precisely knowing what they are: but that which an-

nexes them still to the *species* is the nominal essence of which they are the supposed foundation and cause.

§. 7. The next thing to be considered is, by which of those *essences* it is, that *substances are determined into sorts, or species*; and that, it is evident, is *by the nominal essence*. For it is that alone, that the name, which is the mark of the sort, signifies. It is impossible, therefore, that any thing should determine the sorts of things, which we rank under general names, but that *idea*, which that name is designed as a mark for; which is that, as has been shewn, which we call the *nominal essence*. Why do we say, this is a *horse*, and that a *mule*; this is an *animal*, that an *herb*? How comes any particular thing to be of this or that sort, but because it has that *nominal essence*, or, which is all one, agrees to that abstract *idea*, that name is annexed to? And I desire any one but to reflect on his own thoughts, when he hears or speaks any of those, or other names of substances, to know what sort of *essences* they stand for.

The nominal essence bounds the species.

§. 8. And that the species of things to us, are nothing but the ranking them under distinct names, according to the complex ideas in us, and not according to precise, distinct real *essences* in them, is plain from hence, that we find many of the individuals that are ranked into one sort, called by one common name, and so received as being of one *species*, have yet qualities depending on their real constitutions, as far different one from another, as from others, from which they are accounted to differ *specifically*. This, as it is easy to be observed by all, who have to do with natural bodies; so chymists especially are often, by sad experience, convinced of it, when they, sometimes in vain, seek for the same qualities in one parcel of sulphur, antimony, or vitriol, which they have found in others. For though they are bodies of the same *species*, having the same nominal *essence*, under the same name; yet do they often, upon severe ways of examination, betray

qualities so different one from another, as to frustrate the expectation and labour of very wary chymists. But if things were distinguished into *species*, according to their real essences, it would be as impossible to find different properties in any two individual substances of the same *species*, as it is to find different properties in two circles, or two equilateral triangles. That is properly the *essence* to us, which determines every particular to this or that *classis*; or, which is the same thing, to this or that general name: and what can that be else, but that abstract *idea* to which that name is annexed? and so has, in truth, a reference, not so much of the being of particular things, as to their general denominations.

§. 9. Nor indeed *can we* rank, and *sort* *things*, and consequently (which is the end of sorting) denominate them *by their real essences*, because we know them not. Our faculties carry us no farther towards the knowledge and distinction of substances, than a collection of those sensible *ideas* which we observe in them; which however made with the greatest diligence and exactness we are capable of, yet is more remote from the true internal constitution, from which those qualities flow, than, as I said, a countryman's *idea* is from the inward contrivance of that famous clock at *Strasburg*, whereof he only sees the outward figure and motions. There is not so contemptible a plant or animal, that does not confound the most enlarged understanding. Though the familiar use of things about us take off our wonder; yet it cures not our ignorance. When we come to examine the stones we tread on, or the iron we daily handle, we presently find, we know not their make; and can give no reason of the different qualities we find in them. It is evident the internal constitution, whereon their properties depend, is unknown to us. For, to go no farther than the grossest and most obvious we can imagine amongst them, what is that texture

ture of parts, that real *essence*, that makes lead and antimony fusible; wood and stones not? What makes lead and iron malleable; antimony and stones not? And yet how infinitely these come short of the fine contrivances, and unconceivable *real essences* of plants or animals, every one knows. The workmanship of the all-wise and powerful God, in the great fabrick of the universe, and every part thereof, farther exceeds the capacity and comprehension of the most inquisitive and intelligent man, than the best contrivance of the most ingenious man doth the conceptions of the most ignorant of rational creatures! Therefore we in vain pretend to range things into sorts, and dispose them into certain classes, under names, by their *real essences*, that are so far from our discovery or comprehension. A blind man may as soon sort things by their colours; and he that has lost his smell, as well distinguish a lily and a rose by their odours, as by those internal constitutions which he knows not. He that thinks he can distinguish sheep and goats by their *real essences*, that are unknown to him, may be pleased to try his skill in those *species*, called *cassowary*, and *querechinchio*; and by their internal *real essences*, determine the boundaries of those *species*, without knowing the complex *idea* of sensible qualities, that each of those names stand for in the countries where those animals are to be found.

§. 10. Those therefore who have been taught, that the several species of substances had their distinct *internal substantial forms*; and that it was those *forms* which made the distinction of substances into their true *species* and *genera*, were led yet farther out of the way, by having their minds set upon fruitless enquiries after *substantial forms*, wholly unintelligible, and whereof we have scarce so much as any obscure or confused conception in general.

Not substantial forms, which we know less.

That the nominal essence is that whereby we distinguish species, farther evident from spirits.

§. 11. That our *ranking and distinguishing* natural *substances* into species, *consists in the nominal essences* the mind makes, and not in the *real essences* to be found in the things themselves, is farther evident from our *ideas* of spirits. For the mind getting, only by reflecting on its own operations, those simple *ideas* which it attributes to spirits, it hath, or can have, no other notion of spirit, but by attributing all those operations, it finds in itself, to a sort of beings, without consideration of matter. And even the most advanced notion we have of God, is but attributing the same simple *ideas* which we have got from reflection in what we find in ourselves, and which we conceive to have more perfection in them, than would be in their absence; attributing, I say, those simple *ideas* to him in an unlimited degree. Thus having got, from reflecting on ourselves, the *idea* of *existence*, knowledge, power, and pleasure, each of which we find it better to have than to want; and the more we have of each, the better; joining all these together, with infinity to each of them, we have the complex *idea* of an eternal, omniscient, omnipotent, infinitely wise, and happy being. And though we are told, that there are different species of *angels*; yet we know not how to frame distinct specifick *ideas* of them; not out of any conceit, that the existence of more species than one of spirits is impossible; but because, having no more simple *ideas* (nor being able to frame more) applicable to such beings, but only those few taken from ourselves, and from the actions of our own minds in thinking, and being delighted, and moving several parts of our bodies, we can no otherwise distinguish in our conceptions the several *species of spirits* one from another, but by attributing those operations and powers, we find in ourselves, to them in a higher or lower degree; and so have no very distinct specifick *ideas* of spirits, except only of GOD, to whom we attribute both duration, and all those

other *ideas*, with infinity; to the other spirits, with limitation: nor, as I humbly conceive, do we, between GOD and them in our *ideas*, put any difference by any number of simple *ideas*, which we have of one, and not of the other, but only that of infinity. All the particular *ideas* of existence, knowledge, will, power, and motion, &c. being *ideas* derived from the operations of our minds, we attribute all of them to all sorts of spirits, with the difference only of degrees, to the utmost we can imagine, even infinity, when we would frame, as well as we can, an *idea* of the first being; who yet, it is certain, is infinitely more remote, in the real excellency of his nature, from the highest and perfectest of all created beings, than the greatest man, nay, purest seraph, is from the most contemptible part of matter; and consequently must infinitely exceed what our narrow understandings can conceive of him.

§. 12. It is not impossible to conceive, nor repugnant to reason, that there may be many *species of spirits*, as much separated and diversified one from another by distinct properties whereof we have no *ideas*, as the species of sensible things are distinguished one from another by qualities which we know, and observe in them. That there should be more *species* of intelligent creatures above us, than there are of sensible and material below us, is probable to me from hence; that in all the visible corporeal world, we see no chasms, or gaps. All quite down from us, the descent is by easy steps, and a continued series of things, that in each remove differ very little one from the other. There are fishes that have wings, that are not strangers to the airy region: and there are some birds that are inhabitants of the water, whose blood is cold as fishes, and their flesh is so like in taste, that the scrupulous are allowed them on fish-days. There are animals so near of kin both to birds and beasts, that they are in the middle between both: amphibious animals link the terrestrial and
aquatick

Whereof
there are pro-
bably number-
less species.

aquatick together; seals live at land and at sea, and porpoises have the warm blood and entrails of a hog; not to mention what is confidently reported of mermaids, or sea-men. There are some brutes, that seem to have as much knowledge and reason, as some that are called men: and the animal and vegetable kingdoms are so nearly joined, that if you will take the lowest of one, and the highest of the other, there will scarce be perceived any great difference between them; and so on till we come to the lowest and the most inorganical parts of matter, we shall find every where, that the several species are linked together, and differ but in almost insensible degrees. And, when we consider the infinite power and wisdom of the Maker, we have reason to think, that it is suitable to the magnificent harmony of the universe, and the great design and infinite goodness of the Architect, that the species of creatures should also, by gentle degrees, ascend upward from us toward his infinite perfection, as we see they gradually descend from us downwards: which, if it be probable, we have reason then to be persuaded, that there are far more *species* of creatures above us, than there are beneath; we being, in degrees of perfection, much more remote from the infinite being of GOD, than we are from the lowest state of being, and that which approaches nearest to nothing. And yet of all those distinct species, for the reasons abovesaid, we have no clear distinct *ideas*.

The nominal-
essence that of
the species,
proved from
water and ice.

§. 13. But to return to the species of corporeal substances. If I should ask any one whether *ice* and *water* were two distinct *species* of things, I doubt not but I should be answered in the affirmative: and it cannot be denied, but he that says they are two distinct *species*, is in the right. But if an *Englishman*, bred in *Jamaica*, who, perhaps, had never seen nor heard of *ice*, coming into *England* in the winter, find the water he put in his basin at night, in a great part frozen in
the

the morning, and not knowing any peculiar name it had, should call it hardened water; I ask, whether this would be a new *species* to him, different from water? And, I think it would be answered here, it would not be to him a new *species*, no more than congealed jelly, when it is cold, is a distinct *species* from the same jelly fluid and warm; or than liquid gold, in the furnace, is a distinct *species* from hard gold in the hands of a workman. And if this be so, it is plain, that our *distinct species are nothing but distinct complex ideas, with distinct names annexed to them*. It is true, every substance that exists, has its peculiar constitution, whereon depend those sensible qualities, and powers, we observe in it: but the ranking of things into *species*, which is nothing but sorting them under several titles, is done by us, according to the *ideas* that we have of them: which though sufficient to distinguish them by names, so that we may be able to discourse of them, when we have them not present before us; yet if we suppose it to be done by their real internal constitutions, and that things existing are distinguished by nature into species by *real essences*, according as we distinguish them into species by names, we shall be liable to great mistakes.

§. 14. To distinguish substantial beings into species, according to the usual supposition, that there are certain precise *essences* or *forms* of things, whereby all the individuals existing are by nature distinguished into species, these things are necessary:

Difficulties against a certain number of real essences.

§. 15. *First*, To be assured, that nature, in the production of things, always designs them to partake of certain regulated established *essences*, which are to be the models of all things to be produced. This, in that crude sense it is usually proposed, would need some better explication, before it can fully be assented to.

§. 16. *Secondly*, It would be necessary to know, whether nature always attains that *essence*, it designs
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in the production of things. The irregular and monstrous births, that in diverse sorts of animals have been observed, will always give us reason to doubt of one, or both of these.

§. 17. *Thirdly*, It ought to be determined, whether those we call *monsters* be really a distinct *species*, according to the scholastick notion of the word *species*; since it is certain, that every thing that exists, has its particular constitution: and yet we find, that some of these monstrous productions have few or none of those qualities, which are supposed to result from and accompany the essence of that species, from whence they derive their originals, and to which, by their descent, they seem to belong.

§. 18. *Fourthly*, The *real essences* of those things, which we distinguish into species, and as so distinguished we name, ought to be known; *i. e.* we ought to have *ideas* of them. But since we are ignorant in these four points, *the supposed real essences of things stand us not in stead for the distinguishing substances into species.*

§. 19. *Fifthly*, The only imaginable help in this case would be, that having framed perfect complex *ideas* of the *properties* of things flowing from their different real essences, we should thereby distinguish them into species. But neither can this be done; for, being ignorant of the real essence itself, it is impossible to know all those properties that flow from it, and are so annexed to it, that any one of them being away, we may certainly conclude, that that essence is not there, and so the thing is not of that species. We can never know what are the precise number of properties depending on the real essence of *gold*, any one of which failing, the real essence of gold, and consequently gold, would not be there, unless we knew the real essence of gold itself, and by that determined that species. By the word *gold* here, I must be understood to design a particular piece of matter; *v. g.*
the

the last guinea that was coined. For, if it should stand here in its ordinary signification for that complex *idea* which I or any one else calls gold; *i. e.* for the nominal essence of gold, it would be *jargon*: so hard is it to shew the various meaning and imperfection of words, when we have nothing else but words to do it by.

§. 20. By all which it is clear, That our *distinguishing substances into species* by names, is not at all *founded on their real essences*; nor can we pretend to range and determine them exactly into species, according to internal essential differences.

§. 21. But since, as has been remarked, we have need of general words, though know not the real essences of things; all we can do, is to collect such a number of simple *ideas*, as, by examination, we find to be united together in things existing, and thereof to make one complex *idea*. Which though it be not the real essence of any substance that exists, is yet *the specifick essence*, to which our name belongs, and is convertible with it; by which we may at least try the truth of these *nominal essences*. For example, there be that say, that the *essence* of *body* is extension: if it be so, we can never mistake in putting the essence of any thing for the thing itself. Let us then in discourse put *extension* for *body*: and when we would say that body moves, let us say that *extension* moves, and see how it will look. He that should say, that one *extension* by impulse moves another *extension*, would, by the bare *expression*, sufficiently shew the absurdity of such a notion. The *essence* of any thing, in respect of us, is the whole complex *idea* comprehended and marked by that name; and in substances, besides the several distinct simple *ideas* that make them up, the confused one of substance, or of an unknown support and cause of their union, is always a part: and therefore the *essence* of body is not bare *extension*, but an extended solid thing; and so to say an extended solid thing

But such a collection as our name stands for.

thing moves, or impels another, is all one, and as intelligible as to say, *body* moves or impels. Likewise to say, that a rational animal is capable of conversation, is all one as to say, a *man*. But no one will say, that rationality is capable of conversation, because it makes not the whole *essence* to which we give the name *man*.

Our abstract ideas are to us the measures of species; instance, in that of man.

§. 22. There are creatures in the world that have shapes like ours, but are hairy, and want language, and reason. There are naturals amongst us, that have perfectly our shape, but want reason, and some of them language too. There are creatures, as it is said, (*sit fides penes authorem*, but there appears no contradiction that there should be such) that with language and reason, and a shape in other things agreeing with ours, have hairy tails; others where the males have no beards, and others where the females have. If it be asked, whether these be all *men*, or no, all of human species; it is plain, the question refers only to the nominal essence: for those of them to whom the definition of the word *man*, or the complex *idea* signified by that name, agrees, are *men*, and the other not. But if the enquiry be made concerning the supposed *real essence*; and whether the internal constitution and frame of these several creatures be specifically different, it is wholly impossible for us to answer, no part of that going into our specifick *idea*: only we have reason to think, that where the faculties, or outward frame so much differs, the internal constitution is not exactly the same: but what difference in the internal real constitution makes a specifick difference, it is in vain to enquire; whilst *our measures of species* be, as they are, *only our abstract ideas*, which we know; and not that internal constitution, which makes no part of them. Shall the difference of hair only on the skin be a mark of a different internal specifick constitution between a changeling and a drill, when they agree

agree in shape, and want of reason and speech? And shall not the want of reason and speech be a sign to us of different real constitutions and species between a changeling and a reasonable man? And so of the rest, if we pretend that the distinction of species or sorts is fixedly established by the real frame, and secret constitutions of things.

§. 23. Nor let any one say, that the power of propagation in animals by the mixture of male and female, and in plants by seeds, keeps the supposed real *species* distinct and entire. For, granting this to be true, it would help us in the distinction of the *species* of things no farther than the tribes of animals and vegetables. What must we do for the rest? But in those too it is not sufficient: for, if history lie not, women have conceived by drills; and what real species, by that measure, such a production will be in nature, will be a new question: and we have reason to think this not impossible, since mules and jumarts, the one from the mixture of an ass and a mare, the other from the mixture of a bull and a mare, are so frequent in the world. I once saw a creature that was the issue of a cat and a rat, and had the plain marks of both about it; wherein nature appeared to have followed the pattern of neither sort alone, but to have jumbled them both together. To which he that shall add the monstrous productions that are so frequently to be met with in nature, will find it hard, even in the race of animals, to determine by the pedigree of what *species* every animal's issue is; and be at a loss about the *real essence*, which he thinks certainly conveyed by generation, and has alone a right to the specifick name. But farther, if the *species* of animals and plants are to be distinguished only by propagation, must I go to the *Indies* to see the sire and dam of the one, and the plant from which the seed was gathered, that produced the other, to know whether this be a tiger or that tea?

Species not distinguished by generation.

Not by substantial forms.

§. 24. Upon the whole matter, it is evident, that it is their own collections of sensible qualities, that men make the essences of their several sorts of substances; and that their real internal structures are not considered by the greatest part of men, in the sorting them. Much less were any *substantial forms* ever thought on by any, but those who have in this one part of the world learned the language of the schools; and yet those ignorant men, who pretend not any insight into the real essences, nor trouble themselves about substantial forms, but are content with knowing things one from another by their sensible qualities, are often better acquainted with their differences, can more nicely distinguish them from their uses, and better know what they may expect from each, than those learned quick-sighted men, who look so deep into them, and talk so confidently of something more hidden and essential.

The specifick essences are made by the mind.

§. 25. But supposing that the *real essences* of substances were discoverable by those that would severely apply themselves to that enquiry; yet we could not reasonably think, that the *ranking of things under general names was regulated* by those internal real constitutions, or any thing else but their *obvious appearances*: since languages, in all countries, have been established long before sciences. So that they have not been philosophers, or logicians, or such who have troubled themselves about *forms* and *essences*, that have made the general names that are in use amongst the several nations of men: but those more or less comprehensive terms have for the most part, in all languages, received their birth and signification from ignorant and illiterate people, who sorted and denominated things by those sensible qualities they found in them, thereby to signify them, when absent to others, whether they had an occasion to mention a sort of a particular thing.

§. 26. Since then it is evident, that we fort and name substances by their *nominal*, and not by their real *essences*: the next thing to be considered is, how, and by whom these *essences* come to be made. As to the latter, it is evident they *are made by the mind*, and not by nature: for, where they nature's workmanship, they could not be so various and different in several men, as experience tells us they are. For, if we will examine it, we shall not find the nominal essence of any one *species* of substances in all men the same; no, not of that, which of all others we are the most intimately acquainted with. It could not possibly be, that the abstract *idea*, to which the name *man* is given, should be different in several men, if it were of nature's making; and that to one it should be *animal rationale*, and to another, *animal implume bipes latis unguibus*. He that annexes the name *man* to a complex *idea* made up of sense and spontaneous motion, joined to a body of such a shape, has thereby one essence of the *species man*: and he that upon farther examination, adds rationality, has another essence of the *species* he calls *man*: by which means the same individual will be a true *man* to the one, which is not so to the other. I think, there is scarce any one will allow this upright figure, so well known, to be the essential difference of the *species man*; and yet how far men determine of the sorts of animals, rather by their shape than descent, is very visible; since it has been more than one debated, whether several human *fœtus's* should be preserved, or received to baptism, or no, only because of the difference of their outward configuration from the ordinary make of children, without knowing whether they were not as capable of reason as infants cast in another mould: some whereof, though of an approved shape, are never capable of as much appearance of reason, all their lives, as is to be found in an ape, or an elephant; and never give any signs of being acted by a rational

Therefore
very various
and uncertain.

soul. Whereby it is evident, that the outward figure, which only was found wanting, and not the faculty of reason, which nobody could know would be wanting in its due season, was made essential to the human species. The learned divine and lawyer must, on such occasions, renounce his sacred definition of *animal rationale*, and substitute some other essence of the human species. Monsieur *Menage* furnishes us with an example worth the taking notice of on this occasion. *When the Abbot of St. Martin, says he, was born, he had so little of the figure of a man, that it bespoke him rather a monster. It was for some time under deliberation, whether he should be baptized or no. However, he was baptized, and declared a man provisionally, [till time should shew what he would prove.] Nature had moulded him so untowardly, that he was called all his life the Abbot Malotru, i. e. Ill-shaped. He was of Caen. Menagiana $\frac{278}{436}$.* This child we see was very near being excluded out of the species of *man*, barely by his shape. He escaped very narrowly as he was, and it is certain a figure a little more oddly turned had cast him, and he had been executed as a thing not to be allowed to pass for a man. And yet there can be no reason given, why if the lineaments of his face had been a little altered, a rational soul could not have been lodged in him; why a visage somewhat longer, or a nose flatter, or a wider mouth, could not have consisted as well as the rest of his ill figure, with such a soul, such parts as made him, disfigured as he was, capable to be a dignitary in the church.

§. 27. Wherein then, would I gladly know, consists the precise and *unmoveable boundaries of that species*? It is plain, if we examine, there is *no* such thing *made by nature*, and established by her amongst men. The real essence of that, or any other sort of substances, it is evident, we know not; and therefore are so undetermined in our nominal essences, which we make ourselves, that if several men were to be asked concerning some oddly shaped *fetus*, as soon as born, whether

whether it were a *man*, or no? It is past doubt, one should meet with different answers. Which could not happen, if the nominal essences, whereby we limit and distinguish the species of substances, were not made by man, with some liberty; but were exactly copied from precise boundaries set by nature, whereby it distinguished all substances into certain species. Who would undertake to resolve what *species* that monster was of, which is mentioned by *Licetus, lib. 1. c. 3.* with a man's head and hog's body? Or those other, which to the bodies of men had the heads of beasts, as dogs, horses, &c. If any of these creatures had lived, and could have spoke, it would have increased the difficulty. Had the upper part, to the middle, been of human shape, and all below swine; had it been murder to destroy it? or must the bishop have been consulted, whether it were man enough to be admitted to the font, or no? as I have been told, it happened in *France* some years since, in somewhat a like case. So uncertain are the boundaries of species of animals to us, who have no other measures than the complex *ideas* of our own collecting: and so far are we from certainly knowing what a *man* is; though perhaps it will be judged great ignorance to make any doubt about it. And yet, I think, I may say, that the certain boundaries of that *species* are so far from being determined, and the precise number of simple *ideas* which make the nominal essence so far from being settled and perfectly known, that very material doubts may still arise about it: and I imagine, none of the definitions of the word *man*, which we yet have, nor descriptions of that sort of animal, are so perfect and exact, as to satisfy a considerate inquisitive person; much less to obtain a general consent, and to be that which men would every where stick by, in the decision of cases, and determining of life and death, baptism or no baptism, in productions that might happen.

But not so
arbitrary as
mixed modes.

§. 28. But though these *nominal essences* of *substances* are made by the mind, they are *not yet made so arbitrarily as those of mixed modes*. To the making of any nominal essence, it is necessary, *First*, That the *ideas* whereof it consists, have such an union as to make but one *idea*, how compounded soever. *Secondly*, That the particular *ideas* so united, be exactly the same, neither more nor less. For, if two abstract complex *ideas* differ either in number or sorts of their component parts, they make two different, and not one and the same essence. In the first of these, the mind, in making its complex *ideas* of substances, only follows nature; and puts none together, which are not supposed to have an union in nature. Nobody joins the voice of a sheep with the shape of a horse, nor the colour of lead with the weight and fixedness of gold, to be the complex *ideas*, of any real substances; unless he has a mind to fill his head with *chimeras*, and his discourse with unintelligible words. Men observing certain qualities always joined and existing together, therein copied nature; and of *ideas* so united, made their complex ones of substances. For, though men may make what complex *ideas* they please, and give what names to them they will; yet, if they will be understood, when they speak of things really existing, they must, in some degree, conform their *ideas* to the things they would speak of: or else men's language will be like that of *Babel*, and every man's words, being intelligible only to himself, would no longer serve to conversation, and the ordinary affairs of life, if the *ideas* they stand for be not some way answering the common appearances and agreement of substances, as they really exist.

Though very
imperfect.

§. 29. *Secondly*, Though the mind of man, in making its complex *ideas* of substances, never puts any together that do not really, or are not supposed to co-exist; and so it truly borrows that union from nature: yet the number
it

it combines, *depends upon the various care, industry, or fancy of him that makes it.* Men generally content themselves with some few sensible obvious qualities; and often, if not always, leave out others as material, and as firmly united, as those that they take. Of sensible substances there are two sorts; one of organized bodies, which are propagated by seed; and in these, the shape is that, which to us is the leading quality, and most characteristical part, that determines the *species*: and therefore in vegetables and animals, an extended solid substance, of such a certain figure, usually serves the turn. For, however some men seem to prize their definition of *animal rationale*, yet should there a creature be found, that had language and reason, but partook not of the usual shape of a man, I believe it would hardly pass for a *man*, how much soever it were *animal rationale*. And if *Balaam's* ass had, all his life, discoursed as rationally as he did once with his master, I doubt yet, whether any one would have thought him worthy the name *man*, or allowed him to be of the same species with himself. As in vegetables and animals it is the shape, so in most other bodies not propagated by seed, it is the colour we most fix on, and are most led by. Thus where we find the colour of gold, we are apt to imagine all the other qualities, comprehended in our complex *idea*, to be there also: and we commonly take these two obvious qualities, *viz.* shape and colour, for so presumptive *ideas* of several species, that in a good picture, we readily say, this is a lion, and that a rose; this is a gold, and that a silver goblet, only by the different figures and colours, represented to the eye by the pencil.

§. 30. But though this serves well enough for gross and confused conceptions, and unaccurate ways of talking and thinking; yet *men are far enough from having agreed on the precise number of simple ideas or qualities, belonging to any sort of things, signified by its*

Which yet
serve for com-
mon converse,

name. Nor is it a wonder, since it requires much time, pains and skill, strict enquiry and long examination, to find out what, and how many those simple *ideas* are, which are constantly and inseparably united in nature, and always to be found together in the same subject. Most men wanting either time, inclination, or industry enough for this, even to some tolerable degree, content themselves with some few obvious and outward appearances of things, thereby readily to distinguish and sort them for the common affairs of life; and so, without farther examination, give them names, or take up the names already in use. Which, though in common conversation they pass well enough for the signs of some few obvious qualities co-existing, are yet far enough from comprehending, in a settled signification, a precise number of simple *ideas*; much less all those which are united in nature. He that shall consider, after so much stir about *genus* and *species*, and such a deal of talk of specifick differences, how few words we have yet settled definitions of, may with reason imagine, that those *forms*, which there hath been so much noise made about, are only *chimæras*, which give us no light into the specifick natures of things. And he that shall consider, how far the names of substances are from having significations, wherein all who use them do agree, will have reason to conclude, that though the nominal essences of substances are all supposed to be copied from nature, yet they are all, or most of them, very imperfect; since the composition of those complex *ideas* are, in several men, very different: and therefore, that these boundaries of *species* are as men, and not as nature makes them, if at least there are in nature any such prefixed bounds. It is true, that many particular substances are so made by nature, that they have agreement and likeness one with another, and so afford a foundation of being ranked into sorts. But the sorting things by us, or the making of determinate *species*, being in order to naming and comprehending them

them under general terms, I cannot see how it can be properly said, that nature sets the boundaries of the species of things : or, if it be so, our boundaries of species are not exactly conformable to those in nature. For we having need of general names for present use, stay not for a perfect discovery of all those qualities, which would best shew us their most material differences and agreements ; but we ourselves divide them, by certain obvious appearances, into *species*, that we may the easier, under general names, communicate our thoughts about them. For having no other knowledge of any substance, but of the simple *ideas* that are united in it ; and observing several particular things to agree with others in several of those simple *ideas*, we make that collection our specifick *idea*, and give it a general name ; that in recording our own thoughts, and in our discourse with others, we may in one short word design all the individuals that agree in that complex *idea*, without enumerating the simple *ideas* that make it up ; and so not waste our time and breath in tedious descriptions ; which we see they are fain to do, who would discourse of any new sort of things, they have not yet a name for.

§. 31. But, however these *species* of substances pass well enough in ordinary conversation, it is plain, that this complex *idea*, wherein they observe several individuals to agree, is by different men made very differently ; by some more, and others less accurately. In some, this complex *idea* contains a greater, and in others a smaller number of qualities ; and so is apparently such as the mind makes it. The yellow shining colour make *gold* to children ; others add weight, malleableness, and fusibility ; and others yet other qualities, which they find joined with that yellow colour, as constantly as its weight and fusibility : for in all these, and the like qualities, one has as good a right to be put into the complex *idea* of that substance, wherein they are all joined, as another. And therefore

Essences of
species under
the same name
very different.

fore *different men*, leaving out, or putting in, several simple *ideas*, which others do not, according to their various examination, skill, or observation of that subject, *have different essences of gold*; which must therefore be of their own, and not of nature's making.

The more general our *ideas* are, the more incomplete and partial they are.

§. 32. If the *number of simple ideas that make the nominal essence* of the lowest *species*, or first sorting of individuals, *depends on the mind of man*, variously collecting them, it is much more evident that they do so, in the more comprehensive *classes*, which by the masters of logick are called *genera*. These are complex *ideas* designedly imperfect: and it is visible at first sight, that several of those qualities that are to be found in the things themselves, are purposely left out of *generical ideas*. For as the mind, to make general *ideas*, comprehending several particulars, leaves out those of time and place, and such other that make them incommunicable to more than one individual; so to make other yet more general *ideas*, that may comprehend different sorts, it leaves out those qualities that distinguish them, and puts into its new collection only such *ideas* as are common to several sorts. The same convenience, that made men express several parcels of yellow matter coming from *Guinea* and *Peru* under one name, sets them also upon making of one name, that may comprehend both gold and silver, and some other bodies of different sorts. This is done by leaving out those qualities, which are peculiar to each sort; and retaining a complex *idea* made up of those that are common to them all. To which the name *metal* being annexed, there is a *genus* constituted; the *essence* whereof being that abstract *idea*, containing only malleableness and fusibility, with certain degrees of weight and fixedness, wherein some bodies of several kinds agree, leaves out the colour, and other qualities peculiar to gold and silver, and the other sorts comprehended under the name *metal*. Whereby it is plain, that men follow
not

not exactly the patterns set them by nature, when they make their general *ideas* of substances; since there is no body to be found, which has barely malleableness and fusibility in it, without other qualities as inseparable as those. But men, in making their general *ideas*, seeking more the convenience of language and quick dispatch, by short and comprehensive signs, than the true and precise nature of things, as they exist, have, in the framing their abstract *ideas*, chiefly pursued that end, which was to be furnished with store of general and variously comprehensive names. So that, in this whole business of *genera* and *species*, the *genus*, or more comprehensive, is but a partial conception of what is in the *species*, and the *species* but a partial *idea* of what is to be found in each individual. If therefore any one will think, that a *man*, and a *horse*, and an *animal*, and a *plant*, &c. are distinguished by real essences made by nature, he must think nature to be very liberal of these real essences, making one for body, another for an animal, and another for a horse; and all these *essences* liberally bestowed upon *Bucephalus*. But if we would rightly consider what is done in all these *genera* and *species*, or *sorts*, we should find, that there is no new thing made, but only more or less comprehensive signs, whereby we may be enabled to express, in a few syllables, great numbers of particular things, as they agree in more or less general conceptions, which we have framed to that purpose. In all which we may observe, that the more general term is always the name of a less complex *idea*; and that each *genus* is but a partial conception of the *species* comprehended under it. So that, if these abstract general *ideas* be thought to be complete, it can only be in respect of a certain established relation between them and certain names, which are made use of to signify them; and not in respect of any thing existing, as made by nature.

This all accommodated to the end of speech.

§. 33. *This is adjusted to the true end of speech*, which is to be the easiest and shortest way of communicating our notions. For thus he that would discourse of things, as they agreed in the complex *idea* of extension and solidity, needed but use the word *body* to denote all such: he that to these would join others, signified by the words *life*, *sense* and *spontaneous motion*, needed but use the word *animal*, to signify all which partook of those *ideas*: and he that had made a complex *idea* of a body, with *life*, *sense*, and *motion*, with the faculty of reasoning, and a certain shape joined to it, needed but use the short monosyllable *man*, to express all particulars that correspond to that complex *idea*. This is the proper business of *genus* and *species*: and this men do, without any consideration of *real essences* or *substantial forms*, which come not within the reach of our knowledge, when we think of those things; nor within the signification of our words, when we discourse with others.

Instance in *Cassuaris*.

§. 34. Were I to talk with any one of a sort of birds, I lately saw in St. *James's* Park, about three or four feet high, with a covering of something between feathers and hair, of a dark brown colour, without wings, but in the place thereof two or three little branches, coming down like sprigs of *Spanish* broom; long great legs, with feet only of three claws. and without a tail; I must make this description of it, and so may make others understand me: but when I am told, that the name of it is *Cassuaris*, I may then use that word to stand in discourse for all my complex *idea* mentioned in that description; though by that word, which is now become a specifick name, I know no more of the real essence, or constitution of that sort of animals than I did before; and knew probably as much of the nature of that *species* of birds, before I learned the name, as many *Englishmen* do of swans, or herons, which

which are specifick names, very well known, of sorts of birds common in *England*.

§. 35. From what has been said, it is evident, that *men make sorts of things*. For it being different *essences* alone that make different *species*, it is plain, that they who make those abstract *ideas*, which are the *nominal essences*, do thereby make the *species*, or sort. Should there be a body found, having all the other qualities of gold, except malleableness, it would, no doubt, be made a question whether it were gold or no; *i. e.* whether it were of that *species*. This could be determined only by that abstract *idea*, to which every one annexed the name *gold*; so that it would be true gold to him, and belong to that *species*, who included not malleableness in his *nominal essence* signified by the found *gold*; and on the other side, it would not be true gold, or of that *species* to him, who included malleableness in his specifick *idea*. And who, I pray, is it, that makes these diverse *species*, even under one and the same name, but men that make two different abstract *ideas*, consisting not exactly of the same collection of qualities? Nor is it a mere supposition to imagine, that a body may exist, wherein the other obvious qualities of gold may be without malleableness; since it is certain, that gold itself will be sometimes so eager (as artists call it) that it will as little endure the hammer, as glass itself. What we have said of the putting in, or leaving malleableness out of the complex *idea*, the name *gold* is by any one annexed to, may be said of its peculiar weight, fixedness, and several other the like qualities: for whatsoever is left out, or put in, it is still the complex *idea* to which that name is annexed, that makes the *species*: and as any particular parcel of matter answers that *idea*, so the name of the sort belongs truly to it; and it is of that *species*. And thus any thing is true *gold*, perfect *metal*. All which determination of the
species,

Men determine the sorts;
instance gold.

species, it is plain, depends on the understanding of man, making this or that complex *idea*.

Nature makes
the similitude.

§. 36. This then, in short, is the case : *nature makes many particular things which do agree* one with another in many sensible qualities, and probably too in their internal frame and constitution : but it is not this *real essence* that distinguishes them into *species* ; it is *men*, who taking occasion from the qualities they find united in them, and wherein they observe often several individuals to agree, *range them into sorts, in order to their naming*, for the convenience of comprehensive signs ; under which individuals, according to their conformity to this or that abstract *idea*, come to be ranked as under ensigns ; so that this is of the blue, that the red regiment ; this is a man, that a drill : and in this, I think, consists the whole business of *genus* and *species*.

§. 37. I do not deny, but nature, in the constant production of particular beings, makes them not always new and various, but very much alike, and of kin one to another : but I think it nevertheless true, that *the boundaries of the species, whereby men sort them, are made by men* ; since the essences of the species, distinguished by different names, are, as has been proved, of man's making, and seldom adequate to the internal nature of the things they are taken from. So that we may truly say, such a manner of sorting of things is the workmanship of men.

Each abstract
idea is an ef-
fence.

§. 38. One thing, I doubt not, but will seem very strange in this doctrine ; which is, that from what has been said, it will follow, that *each abstract idea, with a name to it, makes a distinct species*. But who can help it, if truth will have it so ? For so it must remain till somebody can shew us the *species* of things, limited and distinguished by something else ; and let us see, that general terms signify not our abstract *ideas*, but something different from them. I would fain know why a shock and a hound are not as distinct species,

species, as a spaniel and an elephant. We have no other *idea* of the different essence of an elephant and a spaniel, than we have of the different essence of a flock and a hound; all the essential difference, whereby we know and distinguish them one from another, consisting only in the different collection of simple *ideas*, to which we have given those different names.

§. 39. How much *the making of species and genera is in order to general names*, and how much general names are necessary, if not to the being, yet at least to the compleating of a species, and making it pass for such will appear, besides what has been said above concerning ice and water, in a very familiar example. A silent and a striking *watch* are but one *species* to those who have but one name for them: but he that has the name *watch* for one, and *clock* for the other, and distinct complex *ideas* to which those names belong, to him they are different *species*. It will be said perhaps, that the inward contrivance and constitution is different between these two, which the watch-maker has a clear *idea* of. And yet it is plain, they are but one species to him, when he has but one name for them. For what is sufficient in the inward contrivance to make a new *species*? There are some *watches* that are made with four wheels, others with five: is this a specifick difference to the workman? Some have strings and physies, and others none; some have the balance loose, and others regulated by a spiral spring, and others by hogs bristles: are any, or all of these enough to make a specifick difference to the workman, that knows each of these, and several other different contrivances, in the internal constitutions of *watches*? It is certain, each of these hath a real difference from the rest: but whether it be an essential, a specifick difference or no, relates only to the complex *idea*, to which the name *watch* is given: as long as they all agree in the *idea* which that name stands for, and that

Genera and species are in order to naming.

that name does not as a generical name comprehend different *species* under it, they are not essentially nor specifically different. But if any one will make minuter divisions from differences that he knows in the internal frame of watches, and to such precise complex *ideas* give names that shall prevail, they will then be new *species* to them who have those *ideas* with names to them, and can, by those differences, distinguish watches into these several sorts; and then *watch* will be a generical name. But yet they would be no distinct *species* to men ignorant of clock-work, and the inward contrivances of watches, who had no other *idea* but the outward shape and bulk, with the marking of the hours by the hand. For to them all those other names would be but but synonymous terms for the same *idea*, and signify no more, nor any other thing but a *watch*. Just thus, I think, it is in natural things. Nobody will doubt, that the wheels, or springs (if I may so say) within, are different in a *rational man*, and a *changeling*, no more than that there is a difference in the frame between a *drill* and a *changeling*. But whether one or both these differences be essential, or specifical, is only to be known to us, by their agreement or disagreement with the complex *idea* that the the name *man* stands for: for by that alone can it be determined, whether one, or both, or either of those be a man or no.

Species of artificial things less confused than natural.

§. 40. From what has been before said, we may see the reason *why, in the species of artificial things, there is generally less confusion and uncertainty, than in natural.*

Because an *artificial* thing being a production of man, which the artificer designed, and therefore well knows the *idea* of, the name of it is supposed to stand for no other *idea*, nor to import any other essence, than what is certainly to be known, and easy enough to be apprehended. For the *idea* or *essence* of the several sorts of *artificial* things consisting, for the most part, in nothing but the determinate figure of sensible parts,

parts, and sometimes motion depending thereon, which the artificer fashions in matter, such as he finds for his turn, it is not beyond the reach of our faculties to attain a certain *idea* thereof; and so settle the signification of the names whereby the species of *artificial* things are distinguished, with less doubt, obscurity and equivocation, than we can in things natural, whose differences and operations depend upon contrivances beyond the reach of our discoveries.

§. 41. I must be excused here, if I think, *artificial things are of distinct species*, as well as natural: since I find they are as plainly and orderly ranked into sorts, by different abstract *ideas* with general names annexed to them, as distinct one from another as those of natural substances. For why should we not think a watch, and pistol, as distinct species one from another, as a *horse* and a *dog*, they being expressed in our minds by distinct *ideas*, and to others by distinct appellations?

Artificial things of distinct species.

§. 42. This is farther to be observed concerning *substances*, that they *alone*, of all our several sorts of *ideas*, have particular or *proper names*, whereby one only particular thing is signified: because by simple *ideas*, modes and relations, it seldom happens that men have occasion to mention often this or that particular, when it is absent. Besides, the greatest part of mixed modes, being actions which perish in their birth, are not capable of a lasting duration, as substances, which are the actors; and wherein the simple *ideas* that make up the complex *ideas* designed by the name, have a lasting union.

Substances alone have proper names.

§. 43. I must beg pardon of my reader, for having dwelt so long upon this subject, and perhaps with some obscurity. But I desire it may be considered, how *difficult* it is to lead another by words into the thoughts of things, stripped of those *specifick differences* we give them: which things if I name not, I say nothing; and if I do name them,

Difficulty to treat of words with words.

them, I thereby rank them into some sort, or other, and suggest to the mind the usual abstract *idea* of that species; and so cross my purpose. For to talk of a *man*, and to lay by, at the same time, the ordinary signification of the name *man*, which is our complex *idea* usually annexed to it; and bid the reader consider *man*, as he is in himself, and as he is really distinguished from others, in his internal constitution, or real essence, that is, by something, he knows not what, looks like trifling; and yet this one must do, who would speak of the supposed real essences and species of things, as thought to be made by nature, if it be but only to make it understood, that there is no such thing signified by the general names which substances are called by. But because it is difficult by known familiar names to do this, give me leave to endeavour, by an example, to make the different consideration the mind has of specifick names and *ideas* a little more clear; and to shew how the complex *ideas* of modes are referred sometimes to archetypes in the minds of other intelligent beings; or, which is the same, to the signification annexed by others to their received names; and sometimes to no archetypes at all. Give me leave also to shew how the mind always refers its *ideas* of substances, either to the substances themselves, or to the signification of their names, as to the *archetypes*; and also to make plain the nature of species, or sorting of things, as apprehended, and made use of by us; and of the essences belonging to those species, which is, perhaps, of more moment to discover the extent and certainty of our knowledge, than we at first imagine.

Instance of
mixed modes
in *kinneah*
and *niouph*.

§. 44. Let us suppose *Adam* in the state of a grown man, with a good understanding, but in a strange country, with all things new, and unknown about him; and no other faculties, to attain the knowledge of them, but what one of this age has now. He observes *Lameck* more melancholy than usual, and imagines

it to be from a suspicion he has of his wife *Adab*, (whom he most ardently loved) that she had too much kindness for another man. *Adam* discourses these his thoughts to *Eve*, and desires her to take care that *Adab* commit not folly: and in these discourses with *Eve*, he makes use of these two new words *kinneab* and *niouph*. In time, *Adam*'s mistake appears, for he finds *Lamech*'s trouble proceeded from having killed a man: but yet the two names, *kinneab* and *niouph* (the one standing for suspicion, in a husband, of his wife's disloyalty to him, and the other, for the act of committing disloyalty) lost not their distinct significations. It is plain then, that here were two distinct complex ideas of mixed modes, with names to them, two distinct species of actions essentially different; I ask, wherein consisted the essences of these two distinct species of actions? And it is plain, it consisted in a precise combination of simple ideas, different in one from the other. I ask, whether the complex idea in *Adam*'s mind, which he called *kinneab*, were adequate or no? And it is plain, it was; for it being a combination of simple ideas, which he, without any regard to any archetype, without respect to any thing as a pattern, voluntarily put together, abstracted, and gave the name *kinneab* to, to express in short to others, by that one sound, all the simple ideas contained and united in that complex one; it must necessarily follow, that it was an adequate idea. His own choice having made that combination, it had all in it he intended it should, and so could not but be perfect, could not but be adequate, it being referred to no other archetype, which it was supposed to represent.

§. 45. These words, *kinneab* and *niouph*, by degrees grew into common use; and then the case was somewhat altered. *Adam*'s children had the same faculties, and thereby the same power that he had, to make what complex ideas of mixed modes they pleased in their own minds; to abstract them, and make what sounds they pleased, the signs of them: but the use

of names being to make our *ideas* within us known to others, that cannot be done, but when the same sign stands for the same *idea* in two who would communicate their thoughts, and discourse together. Those therefore of *Adam's* children that found these two words, *kinneab* and *niouph*, in familiar use, could not take them for insignificant sounds; but must needs conclude, they stood for something, for certain *ideas*, abstract *ideas*, they being general names, which abstract *ideas* were the essences of the species distinguished by those names. If therefore they would use these words as names of species already established and agreed on, they were obliged to conform the *ideas* in their mind, signified by these names, to the *ideas* that they stood for in other men's minds, as to their patterns and *archetypes*; and then indeed their *ideas* of these complex modes were liable to be inadequate, as being very apt (especially those that consisted of combinations of many simple *ideas*) not to be exactly conformable to the *ideas* in other men's minds, using the same names: though for this there be usually a remedy at hand, which is, to ask the meaning of any word we understand not, of him that uses it: it being as impossible to know certainly what the words *jealousy* and *adultery* (which I think answer קנאה and נאוף) stand for in another man's mind, with whom I would discourse about them; as it was impossible, in the beginning of language, to know what *kinneab* and *niouph* stood for in another man's mind, without explication, they being voluntary signs in every one.

Instance of
substances in
zahab.

§. 46. Let us now also consider, after the same manner, the names of substances, in their first application. One of *Adam's* children roving in the mountains, lights on a glittering substance, which pleases his eye; home he carries it to *Adam*, who, upon consideration of it, finds it to be hard, to have a bright yellow colour, and an exceeding great weight. These, perhaps at first, are all the qualities he takes notice of in it, and abstracting

abstracting this complex *idea*, consisting of a substance having that peculiar bright yellowness, and a weight very great in proportion to its bulk, he gives it the name *zabab*, to denominate and mark all substances that have these sensible qualities in them. It is evident now, that in this case *Adam* acts quite differently from what he did before in forming those *ideas* of mixed modes, to which he gave the name *kinneab* and *niouph*. For there he put *ideas* together only by his own imagination, not taken from the existence of any thing; and to them he gave names to denominate all things that should happen to agree to those his abstract *ideas*, without considering whether any such thing did exist, or no; the standard there was of his own making. But in the forming his *idea* of this new substance he takes the quite contrary course; here he has a standard made by nature; and therefore being to represent that to himself, by the *idea* he has of it, even when it is absent, he puts in no simple *idea* into his complex one, but what he has the perception of from the thing itself. He takes care that his *idea* be conformable to this *archetype*, and intends the name should stand for an *idea* so conformable.

§. 47. This piece of matter, thus denominated *zabab* by *Adam*, being quite different from any he had seen before, no body, I think, will deny to be a distinct species, and to have its peculiar essence; and that the name *zabab* is the mark of the species, and a name belonging to all things partaking in that essence. But here it is plain the essence *Adam* made the name *zabab* stand for, was nothing but a body hard, shining, yellow, and very heavy. But the inquisitive mind of man, not content with the knowledge of these, as I may say, superficial qualities, puts *Adam* upon farther examination of this matter. He therefore knocks, and beats it with flints, to see what was discoverable in the inside: he finds it yield to blows, but not easily separate into pieces; he finds it will bend without breaking. Is not now ductility

to be added to his former *idea*, and made part of the *essence* of the *species* that the name *zabab* stands for? Farther trials discover fusibility and fixedness. Are not they also, by the same reason that any of the others were, to be put into the complex *idea* signified by the name *zabab*? If not, what reason will there be shewn more for the one than the other? If these must, then all the other properties, which any farther trials shall discover in this matter, ought by the same reason to make a part of the ingredients of the complex *idea* which the name *zabab* stands for, and so be the *essence* of the *species* marked by that name. Which properties, because they are endless, it is plain, that the *idea* made after this fashion by this *archetype*, will be always inadequate.

Their *ideas*
imperfect, and
therefore va-
rious.

§. 48. But this is not all, it would also follow, that the *names of substances* would not only have, (as in truth they have) but would also be supposed to *have different significations, as used by different men*, which would very much cumber the use of language. For if every distinct quality, that were discovered in any matter by any one, were supposed to make a necessary part of the complex *idea* signified by the common name given it, it must follow, that men must suppose the same word to signify different things in different men: since they cannot doubt, but different men may have discovered several qualities in substances of the same denomination, which others know nothing of.

Therefore, to
fix their spe-
cies a real ef-
fence is sup-
posed.

§. 49. To avoid this, therefore, they have *supposed a real essence belonging to every species*, from which these properties all flow, and would have their name of the species stand for that. But they not having any *idea* of that *real essence* in substances, and their words signifying nothing but the *ideas* they have, that which is done by this attempt, is only to put the name or sound in the place and stead of the thing having that real essence, without knowing what the

real

real essence is ; and this is that which men do, when they speak of species of things, as supposing them made by nature, and distinguished by real essences.

§. 50. For let us consider, when we affirm that all *gold* is fixed, either it means that fixedness is a part of the definition, part of the nominal essence the word *gold* stands for ; and so this affirmation, *all gold is fixed*, contains nothing but the signification of the term *gold*. Or else it means, that fixedness, not being a part of the definition of the word *gold*, is a property of that substance itself ; in which case, it is plain, that the word *gold* stands in the place of a substance having the real essence of a species of things made by nature. In which way of substitution, it has so confused and uncertain a signification, that though this proposition, *gold is fixed*, be in that sense an affirmation of something real ; yet it is a truth will always fail us in its particular application, and so is of no real use nor certainty. For let it be never so true, that all *gold*, *i. e.* all that has the real essence of *gold*, is fixed, what serves this for, whilst we know not, in this sense, what is, or is not *gold* ? For, if we know not the real essence, of *gold*, it is impossible we should know what parcel of matter has that essence, and so whether it be true *gold* or no.

Which supposition is of no use.

§. 51. To conclude ; what liberty *Adam* had at first to make any complex *ideas* of mixed modes, by no other pattern but by his own thoughts, the same have all men ever since had. And the same necessity of conforming his *ideas* of substances to things without him, as to *archetypes* made by nature, that *Adam* was under, if he would not wilfully impose upon himself, the same are all men ever since under too. The same liberty also, that *Adam* had of affixing any new name to any *idea*, the same has any one still (especially the beginners of languages, if we can imagine any such) but only with this difference, that in places, where men in society have already estab-

Conclusion.

blished a language amongst them, the significations of words are very warily and sparingly to be altered: because men being furnished already with names for their *ideas*, and common use having appropriated known names to certain *ideas*, an affected misapplication of them cannot but be very ridiculous. He that hath new notions, will, perhaps, venture sometimes on the coining new terms to express them: but men think it a boldness, and it is uncertain, whether common use will ever make them pass for current. But, in communication with others, it is necessary that we conform the *ideas* we make the vulgar words of any language stand for, to their known proper significations, (which I have explained at large already) or else to make known that new signification we apply them to.

C H A P. VII.

Of Particles.

Particles connect parts, or whole sentences together.

§. I. **B**ESIDES words which are names of *ideas* in the mind, there are a great many others that are made use of to signify the *connexion* that the mind gives to *ideas*, or *propositions*, one with another. The mind, in communicating its thoughts to others, does not only need signs of the *ideas* it has then before it, but others also, to shew or intimate some particular action of its own, at that time, relating to those *ideas*. This it does several ways; as, *is*, and *is not*, are the general marks of the mind affirming or denying. But, besides affirmation or negation, without which there is in words no truth or falsehood, the mind does, in declaring its sentiments to others, connect not only the parts of propositions, but whole sentences one to another, with their several relations and dependencies, to make a coherent discourse.

§. 2.

§. 2. The words, whereby it signifies what connexion it gives to the several affirmations and negations that it unites in one continued reasoning or narration, are generally called *particles*; and it is in the right use of these, that more particularly consists the clearness and beauty of a good stile. To think well, it is not enough that a man has *ideas* clear and distinct in his thoughts, nor that he observes the agreement or disagreement of some of them; but he must think in train, and observe the dependence of his thoughts and reasonings one upon another: and to express well such methodical and rational thoughts, he must have words to *shew* what *connexion*, *restriction*, *distinction*, *opposition*, *emphasis*, &c. he gives to each respective *part of his discourse*. To mistake in any of these, is to puzzle, instead of informing his hearer: and therefore it is, that those words, which are not truly by themselves the names of any *ideas*, are of such constant and indispensable use in language, and do much contribute to men's well expressing themselves.

In them consists the art of well-speaking.

§. 3. This part of grammar has been, perhaps, as much neglected, as some others over diligently cultivated. It is easy for men to write, one after another, of *cases* and *genders*; *moods* and *tenses*, *gerunds* and *supines*: in these and the like there has been great diligence used; and particles themselves, in some languages, have been, with great shew of exactness, ranked into their several orders. But though *prepositions* and *conjunctions*, &c. are names well known in grammar, and the particles contained under them carefully ranked into their distinct sub-divisions; yet he would shew the right use of particles, and what significancy and force they have, must take a little more pains, enter into his own thoughts, and observe nicely the several postures of his mind in discoursing.

They shew what relation the mind gives to its own thoughts.

§. 4. Neither is it enough, for the explaining of these words, to render them, as is usual in dictionaries,

ries,

ries, by words of another tongue which come nearest to their signification: for what is meant by them is commonly as hard to be understood in one, as another language. They are all *marks of some action or intimation of the mind*; and therefore, to understand them rightly, the several views, postures, stands, turns, limitations, and exceptions, and several other thoughts of the mind, for which we have either none, or very deficient names, are diligently to be studied. Of these there are a great variety, much exceeding the number of particles that most languages have to express them by; and therefore it is not to be wondered, that most of these particles have diverse, and sometimes almost opposite significations. In the Hebrew tongue, there is a particle consisting but of one single letter, of which there are reckoned up, as I remember, seventy, I am sure above fifty several significations.

Instance in *BUT.* §. 5. *BUT* is a particle, none more familiar in our language; and he that says it is a discretive conjunction, and that it answers *sed* in Latin, or *mais* in French, thinks he has sufficiently explained it. But it seems to me to intimate several relations the mind gives to the several propositions, or parts of them, which it joins by this monosyllable.

First, *BUT* to say no more: here it intimates a stop of the mind in the course it was going, before it came to the end of it.

Secondly, *I saw BUT two plants*: here it shews, that the mind limits the sense to what is expressed, with a negation of all other.

Thirdly, *You pray; BUT it is not that GOD would bring you to the true religion.*

Fourthly, *BUT that he would confirm you in your own*: the first of these *BUTS* intimates a supposition in the mind of something otherwise than it should be; the latter shews, that the mind makes a direct opposition between that, and what goes before it.

Fifthly,

Fifthly, *All animals have sense*; BUT *a dog is an animal*: here it signifies little more, but that the latter proposition is joined to the former, as the *minor* of a syllogism.

§. 6. To these, I doubt not, might be added a great many other significations of this particle, if it were my business to examine it in its full latitude, and consider it in all the places it is to be found; which if one should do, I doubt, whether in all those manners it is made use of, it would deserve the title of *discretive*, which grammarians give to it. But I intend not here a full explication of this sort of signs. The instances I have given in this one, may give occasion to reflect upon their use and force in language, and lead us into the contemplation of several actions of our minds in discoursing, which it has found a way to intimate to others by these particles, some whereof constantly, and others in certain constructions, have the sense of a whole sentence contained in them.

This matter
but lightly
touched here.

C H A P. VIII.

Of Abstract and Concrete Terms.

§. 1. **T**HE ordinary words of language, and our common use of them, would have given us light into the nature of our *ideas*, if they had been but considered with attention. The mind, as has been shewn, has a power to abstract its *ideas*, and so they become essences, general essences, whereby the sorts of things are distinguished. Now, each abstract *idea* being distinct, so that of any two the one can never be the other, the mind will, by its intuitive knowledge, perceive their difference; and therefore in propositions no two whole *ideas* can ever be affirmed one of another. This we see in the common use of language, which

Abstract
terms not pre-
dicable one of
another, and
why.

which permits *not any two abstract words, or names of abstract ideas*, to be affirmed one of another. For, how near of kin soever they may seem to be, and how certain soever it is, that man is, an animal, or rational, or white, yet every one, at first hearing, perceives the falshood of these propositions; *humanity is animality, or rationality, or whiteness*: and this is as evident as any of the most allowed maxims. All our affirmations then are only in concrete, which is the affirming, not one abstract *idea* to be another, but one abstract *idea* to be joined to another; which abstract *ideas*, in substances, may be of any sort; in all the rest, are little else but of relations; and in substances, the most frequent are of powers; *v. g. a man is white*, signifies that the thing that has the essence of a man, has also in it the essence of whiteness, which is nothing but a power to produce the *idea* of whiteness in one, whose eyes can discover ordinary objects; or *a man is rational*, signifies, that the same thing that hath the essence of a man hath also in it the essence of rationality, *i. e.* a power of reasoning.

They shew the difference of our *ideas*.

§. 2. This distinction of names shews us also the difference of our *ideas*: for, if we observe them, we shall find, that our *simple ideas have all abstract as well as concrete names*: the one whereof is (to speak the language of grammarians) a substantive, the other an adjective; as whiteness, white; sweetness, sweet. The like also holds in our ideas of modes and relations; as justice, just; equality, equal; only with this difference, that some of the concrete names of relations, amongst men chiefly, are substantives; as *paternitas, pater*; whereof it were easy to render a reason. But as to our *ideas* of *substances*, we have very few or *no abstract names* at all. For, though the schools have introduced *animalitas, humanitas, corperietas*, and some others; yet they hold no proportion with that infinite number of names of substances, to which they never were ridiculous enough to attempt the coining of abstract ones:

ones: and those few that the schools forged, and put into the mouths of their scholars, could never yet get admittance into common use, or obtain the licence of publick approbation. Which seems to me at least to intimate the confession of all mankind, that they have no *ideas* of the real essences of substances, since they have not names for such *ideas*: which no doubt they would have had, had not their consciousness to themselves of their ignorance of them kept them from so idle an attempt. And therefore, though they had *ideas* enough to distinguish gold from a stone, and metal from wood; yet they but timorously ventured on such terms, as *aurietas* and *saxietas*, *metallietas* and *lignietas*, or the like names, which should pretend to signify the real essences of those substances, whereof they knew they had no *ideas*. And indeed, it was only the doctrine of *substantial forms*, and the confidence of mistaken pretenders to a knowledge that they had not, which first coined, and then introduced *animalitas* and *humanitas*, and the like; which yet went very little farther than their own schools, and could never get to be current amongst understanding men. Indeed, *humanitas* was a word familiar amongst the Romans; but in a far different sense, and stood not for the abstract essence of any substance; but was the abstract name of a mode, and its concrete *humanus*, not *homo*.

C H A P. IX.

Of the Imperfection of Words.

§. I. FROM what has been said in the foregoing chapters, it is easy to perceive what imperfection there is in language, and how the very nature of words makes it almost unavoidable, for many of them to be doubtful and uncertain in

Words are used for recording and communicating our thoughts.

their

their significations. To examine the perfection or imperfection of words, it is necessary first to consider their use and end: for, as they are more or less fitted to attain that, so are they more or less perfect. We have in the former part of this discourse, often upon occasion mentioned a *double use of words*.

First, One for the recording of our own thoughts.

Secondly, The other for the communicating of our thoughts to others.

Any words
will serve for
recording.

§. 2. As to the first of these, *for the recording our own thoughts* for the help of our own memories, whereby, as it were, we talk to ourselves, any words will serve the turn. For, since sounds are voluntary and indifferent signs of any *ideas*, a man may use what words he pleases, to signify his own *ideas* to himself; and there will be no imperfection in them, if he constantly use the same sign for the same *idea*, for then he cannot fail of having his meaning understood, wherein consists the right use and perfection of language.

Communica-
tion by words,
civil or philo-
sophical.

§. 3. *Secondly*, as to *communication of words*, that too has a double use.

I. *Civil*.

II. *Philosophical*.

First, By their *civil use*, I mean such a communication of thoughts and *ideas* by words, as may serve for the upholding common conversation and commerce about the ordinary affairs and conveniencies of civil life, in the societies of men one amongst another.

Secondly, By the *philosophical use* of words, I mean such an use of them as may serve to convey the precise notions of things, and to express, in general propositions, certain and undoubted truths, which the mind may rest upon, and be satisfied with, in its search after true knowledge. These two uses are very distinct; and a great deal less exactness will serve in the one, than in the other, as we shall see in what follows.

§. 4. The chief end of language in communication being to be understood, words serve not well for that end, neither in civil nor philosophical discourse, when any word does not excite in the hearer the same *idea* which it stands for in the mind of the speaker. Now, since sounds have no natural connexion with our *ideas*, but have all their signification from the arbitrary imposition of men, the *doubtfulness* and uncertainty of *their signification*, which is the *imperfection* we here are speaking of, has its cause more in the *ideas* they stand for, than in any incapacity there is in one sound, more than in another, to signify any *idea*: for in that regard they are all equally perfect.

The imperfection of words is the doubtfulness of their signification.

That then which makes doubtfulness and uncertainty in the signification of some more than other words, is the difference of *ideas* they stand for.

§. 5. Words having naturally no signification, the *idea* which each stands for, must be learned and retained by those who would exchange thoughts, and hold intelligible discourse with others, in any language; but this is hardest to be done, where,

Causes of their imperfection.

First, The *ideas* they stand for are very complex, and made up of a great number of *ideas* put together.

Secondly, Where the *ideas* they stand for have no certain connexion in nature; and so no settled standard any where in nature existing, to rectify and adjust them by.

Thirdly, Where the signification of the word is referred to a standard, which standard is not easy to be known.

Fourthly, Where the signification of the word, and the real essence of the thing, are not exactly the same.

These are difficulties that attend the signification of several words that are intelligible. Those which are not intelligible at all, such as names standing for any simple *ideas* which another has not organs or faculties

to

to attain, as the names of colours to a blind man, or sounds to a deaf man, need not here be mentioned.

In all these cases we shall find an imperfection in words, which I shall more at large explain, in their particular application to our several sorts of *ideas*: for, if we examine them, we shall find that the *names of mixed modes are most liable to doubtfulness and imperfection for the two first of these reasons; and the names of substances chiefly for the two latter.*

The names of mixed modes doubtful:

§. 6. *First*, The names of *mixed modes* are, many of them, liable to great uncertainty and obscurity in their signification:

First, Because the *ideas* they stand for, are so complex.

I. *Because of that great composition* these complex *ideas* are often made up of. To make words serviceable to the end of communication, it is necessary (as has been said) that they excite, in the hearer, exactly the same *idea* they stand for in the mind of the speaker. Without this, men fill one another's heads with noise and sounds; but convey not thereby their thoughts, and lay not before one another their *ideas*, which is the end of discourse and language. But, when a word stands for a very complex *idea*, that is compounded and decomposed, it is not easy for men to form and retain that *idea* so exactly, as to make the name in common use stand for the same precise *idea*, without any the least variation. Hence it comes to pass, that men's names of very compound *ideas*, such as for the most part are moral words, have seldom, in two different men, the same precise signification, since one man's complex *idea* seldom agrees with another's, and often differs from his own, from that which he had yesterday, or will have to-morrow.

Secondly, Because they have no standards.

§. 7. II. *Because the names of mixed modes* for the most part want standards in nature, whereby men may rectify and adjust their signification; therefore they are very various and doubtful. They are assemblages of *ideas*

ideas put together at the pleasure of the mind, pursuing its own ends of discourse, and suited to its own notions, whereby it designs not to copy any thing really existing, but to denominate and rank things as they come to agree with those *archetypes* or *forms* it has made. He that first brought the word *sham*, *wheel*, or *banter*, in use, put together, as he thought fit, those *ideas* he made it stand for: and as it is with any new names of modes, that are now brought into any language; so was it with the old ones, when they were first made use of. Names, therefore, that stand for collections of *ideas* which the mind makes at pleasure, must needs be of doubtful signification, when such collections are no where to be found constantly united in nature, nor any patterns to be shewn whereby men may adjust them. What the word *murder*, or *sacrilege*, &c. signifies, can never be known from things themselves: there be many of the parts of those complex *ideas*, which are not visible in the action itself: the intention of the mind, or the relation of holy things, which make a part of *murder*, or *sacrilege*, have no necessary connexion with the outward and visible action of him that commits either: and the pulling the trigger of the gun, with which the murder is committed, and is all the action that perhaps is visible, has no natural connexion with those other *ideas*, that make up the complex one, named *murder*. They have their union and combination only from the understanding, which unites them under one name: but uniting them without any rule or pattern, it cannot be but that the signification of the name, that stands for such voluntary collections, should be often various in the minds of different men, who have scarce any standing rule to regulate themselves, and their notions by, in such arbitrary *ideas*.

§. 8. It is true, *common use*, that is the rule of propriety, may be supposed here to afford some aid, to settle the signification of language; and it cannot be de-

Propriety not
a sufficient re-
medy.

nied, but that in some measure it does. Common use *regulates the meaning of words* pretty well for common conversation; but nobody having an authority to establish the precise signification of words, nor determine to what *ideas* any one shall annex them, common use is not sufficient to adjust them to philosophical discourses; there being scarce any name, of any very complex *idea* (to say nothing of others) which, in common use, has not a great latitude, and which, keeping within the bounds of propriety, may not be made the sign of far different *ideas*. Besides, the rule and measure of propriety itself being no where established, it is often matter of dispute, whether this or that way of using a word be propriety of speech, or no. From all which it is evident, that the names of such kind of very complex *ideas* are naturally liable to this imperfection, to be of doubtful and uncertain signification; and, even in men that have a mind to understand one another, do not always stand for the same *idea* in speaker and hearer. Though the names *glory* and *gratitude* be the same in every man's mouth through a whole country, yet the complex collective *idea*, which every one thinks on, or intends by that name, is apparently very different in men using the same language.

The way of learning these names contributes also to their doubtfulness.

§. 9. *The way also wherein the names of mixed modes are ordinarily learned, does not a little contribute to the doubtfulness of their signification.* For, if we will observe how children learn languages, we shall find, that to make them understand what the names of simple *ideas* or substances stand for, people ordinarily shew them the thing whereof they would have them have the *idea*, and then repeat to them the name that stands for it, as *white, sweet, milk, sugar, cat, dog*. But as for mixed modes, especially the most material of them, moral words, the sounds are usually learned first; and then to know what complex *ideas* they stand for, they are either beholden to the explanation

cation of others, or (which happens for the most part) are left to their own observation and industry; which being little laid out in the search of the true and precise meaning of names, these moral words are, in most men's mouths, little more than bare sounds; or, when they have any, it is for the most part but a very loose and undetermined, and consequently obscure and confused signification. And even those themselves, who have with more attention settled their notions, do yet hardly avoid the inconvenience, to have them stand for complex *ideas*, different from those which other, even intelligent and studious men, make them the signs of. Where shall one find any, either *controversial debate*, or *familiar discourse*, concerning *honour, faith, grace, religion, church, &c.* wherein it is not easy to observe the different notions men have of them? which is nothing but this, that they are not agreed in the signification of those words; nor have in their minds the same complex *ideas* which they make them stand for; and so all the contests that follow thereupon, are only about the meaning of a sound. And hence we see, that in the interpretation of laws, whether divine or human, there is no end; comments beget comments, and explications make new matter for explications: and of limiting, distinguishing, varying the signification of these moral words, there is no end. These *ideas* of men's making are, by men still having the same power, multiplied *in infinitum*. Many a man, who was pretty well satisfied of the meaning of a text of scripture, or clause in the code, at first reading, has, by consulting commentators, quite lost the sense of it, and by those elucidations given rise or increase to his doubts, and drawn obscurity upon the place. I say not this, that I think commentaries needless; but to shew how uncertain the names of mixed modes naturally are, even in the mouths of those who had both the intention and the faculty of speaking as clearly as language was capable to express their thoughts.

Hence unavoidable obscurity in ancient authors.

§. 10. What obscurity this has unavoidably brought upon the writings of men, who have lived in remote ages and different countries, it will be needless to take notice: since the numerous volumes of learned men, employing their thoughts that way, are proofs more than enough to shew what attention, study, sagacity, and reasoning are required to find out the true meaning of ancient authors. But there being no writings we have any great concernment to be very solicitous about the meaning of, but those that contain either truths we are required to believe, or laws we are to obey, and draw inconveniencies on us when we mistake or transgress, we may be less anxious about the sense of other authors, who writing but their own opinions, we are under no greater necessity to know them, than they to know ours. Our good or evil depending not on their decrees, we may safely be ignorant of their notions: and therefore in the reading of them, if they do not use their words with a due clearness and perspicuity, we may lay them aside, and, without any injury done them, resolve thus with ourselves,

Si non vis intelligi, debes negligi.

Names of substances of doubtful signification.

§. 11. If the signification of the names of mixed modes be uncertain, because there are no real standards existing in nature, to which those *ideas* are referred, and by which they may be adjusted, the *names of substances are of a doubtful signification*, for a contrary reason, viz. because the *ideas* they stand for are supposed conformable to the reality of things, and are referred to standards made by nature. In our *ideas* of substances we have not the liberty, as in mixed modes, to frame what combinations we think fit, to be the characteristical notes to rank and denominate things by. In these we must follow nature, suit our complex *ideas* to real existences, and regulate the signification of their names by the things themselves, if we will have our names to be the signs of them, and stand for them.

Here, it is true, we have patterns to follow; but patterns that will make the signification of their names very uncertain: for names must be of a very unsteady and various meaning, if the *ideas* they stand for be referred to standards without us, *that either cannot be known at all, or can be known but imperfectly and uncertainly.*

§. 12. The *names of substances* have, as has been shewed, a double reference in their ordinary use.

Names of substances referred, First, To real essences that cannot be known.

First, Sometimes they are made to stand for, and so their signification is supposed to agree to, *the real constitution of things*, from which all their properties flow, and in which they all centre. But this real constitution, or (as it is apt to be called) essence, being utterly unknown to us, any sound that is put to stand for it, must be very uncertain in its application; and it will be impossible to know what things are, or ought to be called an *horse*, or *antimony*, when those words are put for real essences, that we have no *ideas* of at all. And therefore, in this supposition, the names of substances being referred to standards that cannot be known, their significations can never be adjusted and established by those standards.

§. 13. Secondly, The *simple ideas* that are found to *co-exist in substances*, being that which their names immediately signify, these, as united in the several sorts of things, *are* the proper *standards* to which their names are referred, and by which

Secondly, To co-existing qualities, which are known but imperfectly.

their significations may best be rectified. But neither will these *archetypes* so well serve to this purpose, as to leave these names without very various and uncertain significations: because these simple *ideas*, that co-exist and are united in the same subject, being very numerous, and having all an equal right to go into the complex *specifick idea* which the specifick name is to stand for, men, though they propose to themselves

the very same subject to consider, yet frame very different *ideas* about it; and so the name they use for it, unavoidably comes to have, in several men, very different significations. The simple qualities, which make up the complex *ideas*, being most of them powers, in relation to changes which they are apt to make in or receive from other bodies, are almost infinite. He that shall but observe what a great variety of alterations any one of the baser metals is apt to receive from the different application only of fire, and how much a greater number of changes any of them will receive in the hands of a chymist by the application of other bodies, will not think it strange, that I count the properties of any sort of bodies not easy to be collected, and completely known be the ways of enquiry which our faculties are capable of. They being therefore at least so many, that no man can know the precise and definite number, they are differently discovered by different men, according to their various skill, attention, and ways of handling; who therefore cannot chuse but have different *ideas* of the same substance, and therefore make the signification of its common name very various and uncertain. For, the complex *ideas* of substances being made up of such simple ones as are supposed to co-exist in nature, every one has a right to put into his complex *idea* those qualities he has found to be united together. For though, in the substance *gold*, one satisfies himself with colour and weight, yet another thinks solubility in *aqua regia* as necessary to be joined with that colour in his *idea* of gold, as any one does its fusibility; solubility in *aqua regia* being a quality as constantly joined with its colour and weight; as fusibility, or any other: others put in its ductility or fixedness, &c. as they have been taught by tradition or experience. Who of all these has established the right signification of the word *gold*? Or who shall be the judge to determine? Each has his standard in nature, which
he

he appeals to, and with reason thinks he has the same right to put into his complex *idea*, signified by the word *gold*, those qualities which upon trial he has found united, as another, who has not so well examined, has to leave them out; or a third, who has made other trials, has to put in others. For, the union in nature of these qualities being the true ground of their union in one complex *idea*, who can say, one of them has more reason to be put in, or left out, than another? From whence it will always unavoidably follow, that the complex *ideas* of substances in men using the same names for them, will be very various; and so the significations of those names very uncertain.

§. 14. Besides, there is scarce any particular thing existing, which in some of its simple *ideas* does not communicate with a greater, and in others with a less number of particular beings: who shall determine, in this case, which are those

Thirdly, To co-existing qualities, which are known but imperfectly.

that are to make up the precise collection that is to be signified by the specifick name; or can with any just authority prescribe, which obvious or common qualities are to be left out; or which more secret, or more particular, are to be put into the signification of the name of any substance? All *which* together seldom or never fail to *produce* that various and *doubtful signification in the names of substances*, which causes such uncertainty, disputes, or mistakes, when we come to a philosophical use of them.

§. 15. It is true, as to *civil and common conversation*, the general *names of substances*, regulated in their ordinary signification by some obvious qualities, (as by the shape and figure in things of known seminal propagation, and in other substances, for the most part by colour, joined with some other sensible qualities) *do well enough* to design the things men would be understood to speak of: and so they usually conceive well enough the substances

With this imperfection they may serve for civil, but not well for philosophical use.

meant by the word *gold*, or *apple*, to distinguish the one from the other. But in philosophical enquiries and debates, where general truths are to be established, and consequences drawn from positions laid down, there the precise signification of the names of substances will be found, not only *not* to be *well established*, but also very hard to be so. For example, he that shall make malleableness, or a certain degree of fixedness, a part of his complex *idea* of *gold*, may make propositions concerning gold, and draw consequences from them, that will truly and clearly follow from *gold*, taken in such a signification; but yet such as another man can never be forced to admit, nor be convinced of their truth, who makes not malleableness, or the same degree of fixedness, part of that complex *idea* that the name *gold*, in his use of it, stands for.

Instance, Li-
quor of
nerves.

§. 16. This is a natural and almost unavoidable imperfection in almost all the names of substances, in all languages whatsoever, which men will easily find, when once passing from confused or loose notions, they come to more strict and close enquiries. For then they will be convinced how doubtful and obscure those words are in their signification, which in ordinary use appeared very clear and determined. I was once in a meeting of very learned and ingenious physicians, where by chance there arose a question, whether any liquor passed through the filaments of the nerves. The debate having been managed a good while, by variety of arguments on both sides, I (who had been used to suspect that the greatest part of disputes were more about the signification of words, than a real difference in the conception of things) desired, that before they went any further on in this dispute, they would first examine, and establish among them, what the word *liquor* signified. They at first were a little surprized at the proposal; and had they been persons less ingenious, they might perhaps have taken it for a very frivolous or extravagant one: since there

was

was no one there that thought not himself to understand, very perfectly, what the word liquor stood for; which I think too none of the most perplexed names of substances. However, they were pleased to comply with my motion, and upon examination found, that the signification of that word was not so settled and certain, as they had all imagined; but that each of them made it a sign of a different complex *idea*. This made them perceive, that the main of their dispute was about the signification of that term; and that they differed very little in their opinions concerning some fluid and subtile matter passing through the conduits of the nerves; though it is was not so easy to agree whether it was to be called *liquor*, or no; a thing which, when considered, they thought it not worth the contending about.

§. 17. How much this is the case in the greatest part of disputes that men are engaged so hotly in, I shall, perhaps, have an occasion in another place to take notice. Let us only here consider a little more exactly the forementioned instance of the word *gold*, and we shall see how hard it is precisely to determine its signification. I think all agree to make it stand for a body of a certain yellow shining colour; which being the *idea* to which children have annexed that name, the shining yellow part of a peacock's tail is properly to them gold. Others finding fusibility joined with that yellow colour in certain parcels of matter, make of that combination a complex *idea* to which they give the name *gold*, to denote a sort of substances; and so exclude from being *gold* all such yellow shining bodies, as by fire will be reduced to ashes; and admit to be of that *species*, or to be comprehended under that name *gold*, only such substances as, having that shining yellow colour, will by fire be reduced to fusion, and not to ashes. Another by the same reason adds the weight, which being a quality as straitly joined with that colour as its fusibility, he thinks has

Instance,
gold.

the

the same reason to be joined in its *idea*, and to be signified by its name; and therefore the other, made up of body of such a colour and fusibility, to be imperfect; and so on of all the rest: wherein no one can shew a reason why some of the inseparable qualities, that are always united in nature, should be put into the nominal essence, and others left out: or why the word *gold*, signifying that sort of body the ring on his finger is made of, should determine that sort rather by its colour, weight, and fusibility, than by its colour, weight, and solubility in *aqua regia*: since the dissolving it by that liquor is as inseparable from it, as the fusion by fire; and they are both of them nothing but the relation which that substance has to two other bodies, which have a power to operate differently upon it. For by what right is it, that fusibility comes to be a part of the essence signified by the word *gold*, and solubility but a property of it? Or why is its colour part of the essence, and its malleableness but a property? That which I mean is this, that these being all but properties depending on its real constitution, and nothing but powers, either active or passive, in reference to other bodies, no one has authority to determine the signification of the word *gold* (as referred to such a body existing in nature) more to one collection of *ideas* to be found in that body, than to another: whereby the signification of that name must unavoidably be very uncertain: since, as has been said, several people observe several properties in the same substance, and I think, I may say, nobody all. And therefore we have but very imperfect descriptions of things, and words have very uncertain significations.

The names of
simple *ideas*
the least
doubtful

§. 18. From what has been said, it is easy to observe, what has been before remarked, *viz.* That the *names of simple ideas are*, of all others, the *least liable to mistakes*, and that for these reasons. *First*, Because the *ideas* they stand for, being each but one single percep-

perception, are much easier got and more clearly retained, than the more complex ones, and therefore are not liable to the uncertainty which usually attends those compounded ones of *substances and mixed modes*, in which the precise number of simple *ideas* that make them up, are not easily agreed, and so readily kept in the mind. And, *Secondly*, Because they are never referred to any other essence, but barely that perception they immediately signify: which reference is that which renders the signification of the names of substances naturally so perplexed, and gives occasion to so many disputes. Men that do not perversely use their words, or on purpose set themselves to cavil, seldom mistake in any language, which they are acquainted with, the use and signification of the names of simple *ideas*: *white* and *sweet*, *yellow* and *bitter*, carry a very obvious meaning with them, which every one precisely comprehends, or easily perceives he is ignorant of, and seeks to be informed. But what precise collection of simple *ideas* *modesty* or *frugality* stand for in another's use, is not so certainly known. And however we are apt to think, we well enough know what is meant by *gold* or *iron*; yet the precise complex *idea* others make them the signs of, is not so certain: and I believe it is very seldom that in speaker and hearer they stand for exactly the same collection. Which must needs produce mistakes and disputes, when they are made use of in discourses, wherein men have to do with universal propositions, and would settle in their minds universal truths, and consider the consequences that follow from them.

§. 19. By the same rule, *the names of simple modes are next to those of simple ideas, least liable to doubt, and uncertainty, especially those of figure and number, of which men have so clear and distinct ideas.* Who ever, that had a mind to understand them, mistook the ordinary meaning of *seven*, or *a triangle*? And in general the least compounded *ideas* in every kind have the least dubious names.

And next to them simple modes.

The most doubtful are the names of very compounded mixed modes and substances.

§. 20. Mixed modes, therefore, that are made up but of a few and obvious simple *ideas*, have usually names of no very uncertain signification. But the names of *mixed modes* which comprehend a great number of simple *ideas*, are commonly of a very doubtful and undetermined meaning, as has been shewn. The names of substances, being annexed to *ideas* that are neither the real essences nor exact representations of the patterns they are referred to, are liable yet to greater imperfection and uncertainty, especially when we come to a philosophical use of them.

Why this imperfection charged upon words.

§. 21. The great disorder that happens in our names of substances, proceeding for the most part from our want of knowledge, and inability to penetrate into their real constitutions, it may probably be wondered, *Why I charge this as an imperfection rather upon our words than understandings.* This exception has so much appearance of justice, that I think myself obliged to give a reason, why I have followed this method. I must confess then, that when I first began this discourse of the understanding, and a good while after, I had not the least thought that any consideration of words was at all necessary to it. But when, having passed over the original and composition of our *ideas*, I began to examine the extent and certainty of our knowledge, I found it had so near a connexion with words, that, unless their force and manner of signification were first well observed, there could be very little said clearly and pertinently concerning knowledge: which being conversant about truth, had constantly to do with propositions. And though it terminated in things, yet it was for the most part so much by the intervention of words, that they seemed scarce separable from our general knowledge. At least they interpose themselves so much between our understanding, and the truth which it would contem-

plate

plate and apprehend, that, like the *medium* through which visible objects pass, their obscurity and disorder does not seldom cast a mist before our eyes, and impose upon our understandings. If we consider, in the fallacies men put upon themselves as well as others, and the mistakes in men's disputes and notions, how great a part is owing to words, and their uncertain or mistaken significations, we shall have reason to think this no small obstacle in the way to knowledge; which, I conclude, we are the more carefully to be warned of, because it has been so far from being taken notice of as an inconvenience, that the arts of improving it have been made the business of men's study, and obtained the reputation of learning and subtlety, as we shall see in the following chapter. But I am apt to imagine, that, were the imperfections of language, as the instrument of knowledge, more thoroughly weighed, a great many of the controversies that make such a noise in the world, would of themselves cease; and the way to knowledge, and perhaps peace too, lie a great deal opener than it does.

§. 22. Sure I am, that the signification of words, in all languages, depending very much on the thoughts, notions, and *ideas*, of him that uses them, must unavoidably be of great uncertainty to men of the same language and country. This is so evident in the *Greek* authors, that he that shall peruse their writings will find in almost every one of them a distinct language, though the same words. But when, to this natural difficulty in every country, there shall be added different countries and remote ages, wherein the speakers and writers had very different notions, tempers, customs, ornaments, and figures of speech, &c. every one of which influenced the signification of their words then, though to us now they are lost and unknown, *it would become us to be charitable one to another in our interpretations or misunderstanding of those ancient writings*; which, though of great concernment

This should teach us moderation in imposing our own sense of old authors.

concernment to be understood, are liable to the unavoidable difficulties of speech, which, (if we except the names of simple *ideas*, and some very obvious things) is not capable, without a constant defining the terms, of conveying the sense and intention of the speaker, without any manner of doubt and uncertainty, to the hearer. And in discourses of religion, law, and morality, as they are matters of the highest concernment, so there will be the greatest difficulty.

§. 23. The volumes of interpreters and commentators on the Old and New Testament are but too manifest proofs of this. Though every thing said in the text be infallibly true, yet the reader may be, nay, cannot chuse but be, very fallible in the understanding of it. Nor is it to be wondered, that the will of GOD, when clothed in words, should be liable to that doubt and uncertainty, which unavoidably attends that sort of conveyance; when even his Son, whilst clothed in flesh, was subject to all the frailties and inconveniencies of human nature, sin excepted. And we ought to magnify his goodness, that he hath spread before all the world such legible characters of his works and providence, and given all mankind so sufficient a light of reason, that they to whom this written word never came, could not (whenever they set themselves to search) either doubt of the being of a GOD, or of the obedience due to him. Since then the precepts of natural religion are plain, and very intelligible to all mankind, and seldom come to be controverted; and other revealed truths, which are conveyed to us by books and languages, are liable to the common and natural obscurities and difficulties incident to words, methinks it would become us to be more careful and diligent in observing the former, and less magisterial, positive, and imperious, in imposing our own sense and interpretations of the latter.

C H A P. X.

Of the Abuse of Words.

§. 1. **B**ESIDES the imperfection that is naturally in language, and the obscurity and confusion that is so hard to be avoided in the use of words, there are several wilful faults and neglects which men are guilty of, in this way of communication, whereby they render these signs less clear and distinct in their signification, than naturally they need to be.

Abuse of words.

§. 2. *First*, In this kind, the first and most palpable abuse is, the using of words without clear and distinct *ideas*; or, which is worse, signs without any thing signified. Of these there are two sorts:

First, Words without any, or without clear *ideas*.

I. One may observe, in all languages, certain words, that, if they be examined, will be found, in their first original, and their appropriated use, not to stand for any clear and distinct *ideas*. These, for the most part, the several *sects* of philosophy and religion have introduced. For their authors, or promoters, either affecting something singular, and out of the way of common apprehensions, or to support some strange opinions, or cover some weakness of their hypothesis, seldom fail to coin new words, and such as, when they come to be examined, may justly be called *insignificant terms*. For having either had no determinate collection of *ideas* annexed to them, when they were first invented; or at least such as, if well examined, will be found inconsistent, it is no wonder if afterwards, in the vulgar use of the same party, they remain empty sounds, with little or no signification, amongst those who think it enough to have them often in their mouths, as the distinguishing characters of their church, or school, without much troubling their heads to examine what are the precise *ideas* they stand for.

for. I shall not need here to heap up instances, every one's reading and conversation will sufficiently furnish him: or if he wants to be better stored, the great mint-masters of these kind of terms, I mean the school-men and metaphysicians, (under which, I think, the disputing natural and moral philosophers of these latter ages may be comprehended) have wherewithal abundantly to content him.

§. 3. II. Others there be, who extend this abuse yet farther, who take so little care to lay by words, which in their primary notation have scarce any clear and distinct *ideas* which they are annexed to, that by an unpardonable negligence, they familiarly *use words*, which the propriety of language has affixed to very important *ideas*, *without any distinct meaning* at all. *Wisdom, glory, grace, &c.* are words frequent enough in every man's mouth; but if a great many of those who use them, should be asked what they mean by them, they would be at a stand, and not know what to answer: a plain proof, that though they have learned those sounds, and have them ready at their tongue's end, yet there are no determined *ideas* laid up in their minds, which are to be expressed to others by them.

Occasioned
by learning
names before
the *ideas* they
belong to.

§. 4. *Men having been accustomed from their cradles, to learn words*, which are easily got and retained, *before they knew*, or had framed the *complex ideas*, to which they were annexed, or which were to be found in the things *they* were thought to *stand for*, they *usually continue to do so* all their lives, and without taking the pains necessary to settle in their minds determined *ideas*, they use their words for such unsteady and confused notions as they have, contenting themselves with the same words other people use; as if their very sound necessarily carried with it constantly the same meaning. This, though men make a shift with in the ordinary occurrences of life, where they find it necessary to be understood, and therefore they make signs till they are so: yet this insignificancy in
their

their words, when they come to reason concerning either their tenets or interest, manifestly fills their discourse with abundance of empty unintelligible noise and jargon, especially in moral matters, where the words for the most part, standing for arbitrary and numerous collections of *ideas*, not regularly and permanently united in nature, their bare sounds are often only thought on, or at least very obscure and uncertain notions annexed to them. Men take the words they find in use amongst their neighbours; and that they may not seem ignorant what they stand for, use them confidently without much troubling their heads about a certain fixed meaning; whereby, besides the ease of it, they obtain this advantage, that as in such discourses they seldom are in the right, so they are as seldom to be convinced that they are in the wrong; it being all one to go about to draw those men out of their mistakes, who have no settled notions, as to dispossess a vagrant of his habitation, who has no settled abode. This I guess to be so; and every one may observe in himself and others, whether it be or no.

§. 5. *Secondly*, Another great abuse of words is, *inconstancy* in the use of them. It is hard to find a discourse written of any subject, especially of controversy, wherein one shall not observe, if he read with attention, the same words (and those commonly the most material in the discourse, and upon which the argument turns) used sometimes for one collection of simple *ideas*, and sometimes for another, which is a perfect abuse of language. Words being intended for signs of my *ideas*, to make them known to others, not by any natural signification, but by a voluntary imposition, it is plain cheat and abuse, when I make them stand sometimes for one thing, and sometimes for another; the wilful doing whereof can be imputed to nothing but great folly, or greater dishonesty. And a man, in his accompts with another, may, with as much fairness, make the characters of numbers

Secondly, Unsteady application of them.

stand sometimes for one, and sometimes for another collection of units, (v. g. this character 3 stands sometimes for three, sometimes for four, and sometimes for eight) as in his discourse, or reasoning, make the same words stand for different collections of simple *ideas*. If men should do so in their reckonings, I wonder who would have to do with them? One who would speak thus in the affairs and business of the world, and call 8 sometimes seven, and sometimes nine, as best served his advantage, would presently have clapped upon him one of the two names men constantly are disgusted with. And yet in arguings, and learned contests, the same sort of proceeding passes commonly for wit and learning; but to me it appears a greater dishonesty than the misplacing of counters, in the casting up a debt; and the cheat the greater, by how much truth is of greater concernment and value than money.

Thirdly, Affected obscurity by wrong application.

§. 6. *Thirdly*, Another abuse of language, is *affected obscurity*, by either applying old words to new and unusual significations, or introducing new and ambiguous terms, without defining either; or else putting them so together, as may confound their ordinary meaning. Though the peripatetick philosophy has been most eminent in this way, yet other sects have not been wholly clear of it. There is scarce any of them that are not cumbered with some difficulties, (such is the imperfection of human knowledge) which they have been fain to cover with obscurity of terms, and to confound the signification of words, which, like a mist before people's eyes, might hinder their weak parts from being discovered. That *body* and *extension* in common use stand for two distinct *ideas*, is plain to any one that will but reflect a little. For were their signification precisely the same, it would be proper and as intelligible to say, *the body of an extension*, as *the extension of a body*; and yet there are those who find it necessary to confound their signification. To this

this abuse, and the mischiefs of confounding the signification of words, logick and the liberal sciences, as they have been handled in the schools, have given reputation; and the admired art of disputing hath added much to the natural imperfection of languages, whilst it has been made use of and fitted to perplex the signification of words, more than to discover the knowledge and truth of things: and he that will look into that sort of learned writings, will find the words there much more obscure, uncertain, and undetermined in their meaning, than they are in ordinary conversation.

§. 7. This is unavoidably to be so, where men's parts and learning are estimated by their skill in *disputing*. And if reputation and reward shall attend these conquests, which depend mostly on the fineness and niceties of words, it is no wonder if the wit of men so employed, should perplex, involve and subtilize the signification of sounds, so as never to want something to say, in opposing or defending any question; the victory being adjudged not to him who had truth on his side, but the last word in the dispute.

Logick and dispute has much contributed to this.

§. 8. This, though a very useless skill, and that which I think the direct opposite to the ways of knowledge, hath yet passed hitherto under the laudable and esteemed names of *subtlety* and *acuteness*; and has had the applause of the schools, and encouragement of one part of the learned men of the world. And no wonder, since the philosophers of old, (the disputing and wrangling philosophers, I mean, such as *Lucian* wittily and with reason taxes) and the schoolmen since, aiming at glory and esteem, for their great and universal knowledge, easier a great deal to be pretended to, than really acquired, found this a good expedient to cover their ignorance, with a curious and inexplicable web of perplexed words, and procure themselves the admiration of others, by unintelligible terms, the apter

Calling it subtlety.

to produce wonder, because they could not be understood: whilst it appears in all history, that these profound doctors were no wiser, nor more useful than their neighbours; and brought but small advantage to human life, or the societies wherein they lived: unless the coining of new words, where they produced no new things to apply them to, or the perplexing or obscuring the signification of old ones, and so bringing all things into question and dispute, were a thing profitable to the life of man, or worthy commendation and reward.

This learning very little benefits society. §. 9. For notwithstanding these learned disputants, these all-knowing doctors, it was to the unscholastick statesman, that the governments of the world owed their peace, defence and liberties; and from the illiterate and contemned mechanick, (a name of disgrace) that they received the improvements of useful arts. Nevertheless, this artificial ignorance, and *learned gibberish*, prevailed mightily in these last ages, by the interest and artifice of those, who found no easier way to that pitch of authority and dominion they have attained, than by amusing the men of business, and ignorant, with hard words, or employing the ingenious and idle in intricate disputes, about unintelligible terms, and holding them perpetually entangled in that endless labyrinth. Besides, there is no such way to gain admittance, or give defence to strange and absurd doctrines, as to guard them round about with legions of obscure, doubtful, and undefined words: which yet makes these retreats more like the dens of robbers, or holes of foxes, than the fortresses of fair warriors; which if it be hard to get them out of, it is not for the strength that is in them, but the briars and thorns, and the obscurity of the thickets they are beset with. For untruth being unacceptable to the mind of man, there is no other defence left for absurdity, but obscurity.

§. 10.

§. 10. Thus learned ignorance, and this art of keeping, even inquisitive men, from true knowledge, hath been propagated in the world, and hath much perplexed, whilst it pretended to inform the understanding. For we see, that other well-meaning and wise men, whose education and parts had not acquired that *acuteness*, could intelligibly express themselves to one another; and in its plain use, make a benefit of language. But though unlearned men well enough understood the words *white* and *black*, &c. and had constant notions of the *ideas* signified by those words; yet there were philosophers found, who had learning and *subtlety* enough to prove, that *snow was black*, *i. e.* to prove; that *white was black*; whereby they had the advantage to destroy the instruments and means of discourse, conversation, instruction, and society; whilst with great art and *subtlety* they did no more but perplex and confound the signification of words, and thereby render language less useful, than the real defects of it had made it: a gift which the illiterate had not attained to.

But destroys the instruments of knowledge and communication.

§. 11. These learned men did equally instruct men's understandings, and profit their lives, as he who should alter the signification of known characters, and, by a subtle device of learning, far surpassing the capacity of the illiterate, dull, and vulgar, should in his writing, shew, that he could put *A* for *B*, and *D* for *E*, &c. to the no small admiration and benefit of his reader. It being as senseless to put *black*, which is a word agreed on to stand for one sensible *idea*, to put it, I say, for another, or the contrary *idea*, *i. e.* to call *snow black*, as to put this mark *A*, which is a character agreed on to stand for one modification of sound, made by a certain motion of the organs of speech, for *B*, which is agreed on to stand for another modification of sound, made by another certain motion of the organs of speech.

As useful as to confound the sound of the letters.

This art has
perplexed re-
ligion and
justice.

§. 12. Nor hath this mischief stopped in logical niceties, or curious empty speculations; it hath invaded the great concerns of human life and society; obscured and perplexed the material truths of law and divinity; brought confusion, disorder, and uncertainty into the affairs of mankind; and if not destroyed, yet in great measure rendered useless, those two great rules, religion and justice. What have the greatest part of the comments and disputes upon the laws of GOD and man, served for, but to make the meaning more doubtful, and perplex the sense? What have been the effect of those multipled curious distinctions, and acute niceties, but obscurity and uncertainty, leaving the words more unintelligible, and the reader more at a loss? How else comes it to pass, that princes, speaking or writing to their servants, in their ordinary commands, are easily understood, speaking to their people, in their laws, are not so? And as I remarked before, doth it not often happen, that a man of an ordinary capacity, very well understands a text, or a law, that he reads, till he consults an expositor, or goes to council; who by that time he hath done explaining them, makes the words signify either nothing at all, or what he pleases.

And ought
not to pass for
learning.

§. 13. Whether any by-interests of these professions have occasioned this, I will not here examine; but I leave it to be considered, whether it would not be well for mankind, whose concernment it is to know things as they are, and to do what they ought, and not to spend their lives in talking about them, or tossing words to and fro; whether it would not be well, I say, that the use of words were made plain and direct; and that language which was given us for the improvement of knowledge, and bond of society, should not be employed to darken truth, and unsettle people's rights; to raise mists, and render unintelligible both morality and religion? Or that at least, if this will happen,

happen, it should not be thought learning or knowledge to do so?

§. 14. *Fourthly*, Another great *abuse of words is, the taking them for things*. This though it in some degree concerns all names in general, yet more particularly affects those of substances. To this abuse those men are most subject, who confine their thoughts to any one system, and give themselves up into a firm belief of the perfection of any received hypothesis: whereby they come to be persuaded, that the terms of that sect are so suited to the nature of things, that they perfectly correspond with their real existence. Who is there, that has been bred up in the peripatetick philosophy, who does not think the ten names, under which are ranked the ten predicaments, to be exactly conformable to the nature of things? Who is there of that school, that is not persuaded, that *substantial forms, vegetative souls, abhorrence of a vacuum, intentional species, &c.* are something real? These words men have learned from their very entrance upon knowledge, and have found their masters and systems lay great stress upon them; and therefore they cannot quit the opinion that they are conformable to nature, and are the representations of something that really exists. The *Platonists* have their *soul of the world*, and the *Epicureans* their *endeavour towards motion* in their atoms, when at rest. There is scarce any sect in philosophy has not a distinct set of terms that others understand not. But yet this gibberish, which in the weakness of human understanding, serves so well to palliate men's ignorance, and cover their errors, comes by familiar use amongst those of the same tribe, to seem the most important part of language, and of all other the terms the most significant: and should *aerial* and *ætherial vehicles* come once, by the prevalency of that doctrine, to be generally received any where, no doubt those terms would make impressions on men's minds, so as to establish them in the persuasion of the reality

reality of such things, as much as *peripatetick forms* and *intentional species* have heretofore done.

Instance in
matter.

§. 15. How much *names taken for things* are apt to *mislead the understanding*, the attentive reading of philosophical writers would abundantly discover; and that, perhaps, in words little suspected of any such misuse, I shall instance in one only, and that a very familiar one. How many intricate disputes have there been about *matter*, as if there were some such thing really in nature, distinct from *body*; as it is evident, the word *matter* stands for an *idea* distinct from the *idea* of *body*! For if the *ideas* these two terms stood for were precisely the same, they might indifferently in all places be put one for another. But we see, that though it be proper to say, there is *one matter of all bodies*, one cannot say, There is *one body of all matters*: we familiarly say, one *body* is bigger than another; but it sounds harsh (and I think is never used) to say, one *matter* is bigger than another. Whence comes this then? *viz.* from hence, that though *matter* and *body* be not really distinct, but wherever there is the one, there is the other; yet *matter* and *body* stand for two different conceptions, whereof the one is incomplete, and but a part of the other. For *body* stands for a solid extended figured substance, whereof *matter* is but a partial and more confused conception, it seeming to me to be used for the substance and solidity of *body*, without taking in its extension and figure; and therefore it is that speaking of *matter*, we speak of it always as one, because in truth, it expressly contains nothing but the *idea* of a solid substance, which is every where the same, every where uniform. This being our *idea* of *matter*, we no more conceive, or speak of different *matters* in the world, than we do of different solidities; though we both conceive, and speak of different bodies; because extension and figure are capable of variation. But since solidity cannot exist without extension and figure, the taking *matter* to be the name
of

of something really existing under that precision, has no doubt produced those obscure and unintelligible discourses and disputes, which have filled the heads and books of philosophers concerning *materia prima*; which imperfection or abuse, how far it may concern a great many other general terms, I leave to be considered. This, I think, I may at least say, that we should have a great many fewer disputes in the world, if words were taken for what they are, the signs of our *ideas* only, and not for things themselves. For when we argue about *matter*, or any the like term, we truly argue only about the *idea* we express by that sound, whether that precise *idea* agree to any thing really existing in nature, or no. And, if men would tell what *ideas* they make their words stand for, there could not be half that obscurity or wrangling, in the search or support of truth, that there is.

§. 16. But, whatever inconvenience follows from this mistake of words, this I am sure, that by constant and familiar use, they charm men into notions far remote from the truth of things. It would be a hard matter to persuade any one that the words which his father or school-master, the parson of the parish, or such a reverend doctor used, signified nothing that really existed in nature: which, perhaps, is *none of the least causes, that men are so hardly drawn to quit their mistakes*, even in opinions purely philosophical, and where they have no other interest but truth. For the words they have a long time been used to, remaining firm in their minds, it is no wonder, that the wrong notions annexed to them should not be removed.

This makes errors lasting.

§. 17. *Fifthly*, Another abuse of words, is the setting them in the place of things, which they do or can by no means signify.

Fifthly, Setting them for what they cannot signify.

We may observe, that in the general names of substances, whereof the nominal essences are only known to us, when we put them into propositions,

sitions, and affirm or deny any thing about them, we do most commonly tacitly suppose, or intend they should stand for the real essence of a certain sort of substances. For when a man says, *gold is malleable*, he means and would insinuate something more than this, that *what I call gold is malleable*, (though truly it amounts to no more) but would have this understood, *viz. that gold, i. e. what has the real essence of gold, is malleable*; which amounts to thus much, that *malleableness depends on, and is inseparable from the real essence of gold*. But a man not knowing wherein that real essence consists, the connexion in his mind of malleableness is not truly with an essence he knows not, but only with the sound gold he puts for it. Thus when we say, that *animal rationale* is, and *animal implume bipes latis unguibus* is not a good definition of a man; it is plain, we suppose the name *man* in this case to stand for the real essence of a species, and would signify, that a *rational animal* better described that real essence than *a two legged animal with broad nails, and without feathers*. For else, why might not *Plato* as properly make the word *ἄνθρωπος*, or *man*, stand for his complex idea, made up of the ideas of a body, distinguished from others by a certain shape and other outward appearances, as *Aristotle* make the complex idea, to which he gave the name *ἄνθρωπος*, or *man*, of body, and the faculty of reasoning joined together; unless the name *ἄνθρωπος*, or *man*, were supposed to stand for something else, than what it signifies; and to be put in the place of some other thing than the *idea* man professes he would express by it?

V. g. Putting them for the real essences of substances.

§. 18. It is true, the names of substances would be much more useful, and propositions made in them much more certain, were the real essences of substances the *ideas* in our minds, which those words signified. And it is for want of those real essences, that our words convey so little knowledge or certainty in our discourses about them: and therefore the mind, to remove that imperfection as much as it can, makes them,

them, by a secret supposition, to stand for a thing having that real essence, as if thereby it made some nearer approaches to it. For though the word *man* or *gold*, signify nothing truly but a complex *idea* of properties, united together in one sort of substances: yet there is scarce any body in the use of these words, but often supposes each of those names to stand for a thing having the real essence, on which those properties depend. Which is so far from diminishing the imperfection of our words, that by a plain abuse it adds to it, when we would make them stand for something, which not being in our complex *idea*, the name we use can no ways be the sign of.

§. 19. This shews us the reason why in *mixed modes* any of the *ideas*, that make the composition of the complex one, being left out or changed, it is allowed to be another thing, *i. e.* to be of another species, as is plain in *chance-medley*, *man-slaughter*, *murder*, *parricide*, &c. The reason whereof is, because the complex *idea* signified by that name, is the real, as well as nominal essence; and there is no secret reference of that name to any other essence but that. But in *substances* it is not so. For though in that called *gold*, one puts into his complex *idea* what another leaves out, and *vice versa*; yet men do not usually think that therefore the species is changed: because they secretly in their minds refer that name, and suppose it annexed to a real immutable essence of a thing existing, on which those properties depend. He that adds to his complex *idea* of *gold*, that of fixeness or solubility in *aqua regia*, which he put not in it before, is not thought to have changed the species; but only to have a more perfect *idea*, by adding another simple *idea*, which is always in fact joined with those other, of which his former complex *idea* consisted. But this reference of the name to a thing, whereof we have not the *idea*, is so far from helping at all, that it only serves the more to involve us in difficulties.

Hence we think every change of our *idea* in substances, not to change the species.

difficulties. For by this tacit reference to the real essence of that species of bodies, the word *gold*, (which by standing for a more or less perfect collection of simple *ideas*, serves to design that sort of body well enough in civil discourse) comes to have no signification at all, being put for somewhat whereof we have no *idea* at all, and so can signify nothing at all, when the body itself is away. For however it may be thought all one; yet, if well considered, it will be found a quite different thing, to argue about *gold* in name, and about a parcel of the body itself, v. g. a piece of *leaf gold* laid before us; though in discourse we are fain to substitute the name for the thing.

The cause of the abuse, a supposition of nature's working always regularly.

§. 20. That which I think very much disposes men to substitute their names for the real essences of *species*, is the supposition before-mentioned, that nature works regularly in the production of things, and sets the boundaries to each of those *species*, by giving exactly the same real internal constitution to each individual, which we rank under one general name. Whereas any one who observes their different qualities can hardly doubt, that many of the individuals, called by the same name, are in their internal constitution as different one from another, as several of those which are ranked under different specifick names. *This supposition, however, that the same precise internal constitution goes always with the same specifick name, makes men forward to take those names for the representatives of those real essences, though indeed they signify nothing but the complex ideas they have in their minds when they use them. So that, if I may so say, signifying one thing, and being supposed for, or put in the place of another, they cannot but, in such a kind of use, cause a great deal of uncertainty in men's discourses; especially in those who have thoroughly imbibed the doctrine of substantial forms, whereby they firmly imagine the several species of things to be determined and distinguished.*

§. 21.

§. 21. But however preposterous and absurd it be, to make our names stand for *ideas* we have not, or (which is all one) essences that we know not, it being in effect to make our words the signs of nothing; yet it is evident to any one who ever so little reflects on the use men make of their words, that there is nothing more familiar. When a man asks, whether this or that thing he sees, let it be a drill, or a monstrous *fœtus*, be a man, or no; it is evident, the question is not, whether that particular thing agree to his complex *idea*, expressed by the name *man*, but whether it has in it the real essence of a species of things, which he supposes his name *man* to stand for. In which way of using the names of substances, there are these false suppositions contained:

This abuse contains two false suppositions.

First, That there are certain precise essences, according to which nature makes all particular things, and by which they are distinguished into *species*. That every thing has a real constitution, whereby it is what it is, and on which its sensible qualities depend, is past doubt: but I think it has been proved, that this makes not the distinction of *species*, as we rank them; nor the boundaries of their names.

Secondly, This tacitly also insinuates, as if we had *ideas* of these proposed essences. For to what purpose else is it, to enquire whether this or that thing have the real essence of the species *man*, if we did not suppose that there were such a specifick essence known? Which yet is utterly false: and therefore such application of names, as would make them stand for *ideas* which we have not, must needs cause great disorder in discourses and reasonings about them, and be a great inconvenience in our communication by words.

§. 22. *Sixthly*, There remains yet another more general, though perhaps less observed *abuse of words*; and that is, that men having by a long and familiar use annexed to them certain *ideas*, they are apt to imagine so near and necessary a con-

Sixthly, A supposition that words have a certain and evident signification.

nexion

nexion between the names and the signification they use them in, that they forwardly suppose one cannot but understand what their meaning is; and therefore one ought to acquiesce in the words delivered, as if it were past doubt, that in the use of those common received sounds, the speaker and hearer had necessarily the same precise *ideas*. Whence presuming, that when they have in discourse used any term, they have thereby, as it were, set before others, the very thing they talk of. And so likewise taking the words of others, as naturally standing for just what they themselves have been accustomed to apply them to, they never trouble themselves to explain their own, or understand clearly others meaning. From whence commonly proceeds noise and wrangling, without improvement or information; whilst men take words to be the constant regular marks of agreed notions, which in truth are no more but the voluntary and unsteady signs of their own *ideas*. And yet men think it strange, if in discourse, or (where it is often absolutely necessary) in dispute, one sometimes asks the meaning of their terms: though the arguings one may every day observe in conversation, make it evident, that there are few names of complex *ideas*, which any two men use for the same just precise collection. It is hard to name a word which will not be a clear instance of this. *Life* is a term, none more familiar. Any one almost would take it for an affront, to be asked what he meant by it. And yet if it comes in question, whether a plant, that lies ready formed in the seed, have life; whether the embryo in an egg before incubation, or a man in a swoon without sense or motion, be alive, or no? It is easy to perceive, that a clear distinct settled *idea* does not always accompany the use of so known a word, as that of *life* is. Some gross and confused conceptions men indeed ordinarily have, to which they apply the common words of their language, and such a loose use of their words serves them well enough in their ordinary discourses

courses or affairs. But this is not sufficient for philosophical enquiries. Knowledge and reasoning require precise determinate *ideas*. And though men will not be so importunately dull, as not to understand what others say, without demanding an explication of their terms; nor so troublesomely critical, as to correct others in the use of the words they receive from them; yet where truth and knowledge are concerned in the case, I know not what fault it can be to desire the explication of words, whose sense seems dubious; or why a man should be ashamed to own his ignorance, in what sense another man used his words, since he has no other way of certainly knowing it, but by being informed. This abuse of taking words upon trust, has no where spread so far, nor with so ill effects, as amongst men of letters. The multiplication and obstinacy of disputes, which has so laid waste the intellectual world, is owing to nothing more than to this ill use of words. For though it be generally believed, that there is great diversity of opinions in the volumes and variety of controversies the world is distracted with; yet the most I can find, that the contending learned men of different parties do, in their arguings one with another, is, that they speak different languages. For I am apt to imagine, that when any of them quitting terms, think upon things, and know what they think, they think all the same: though perhaps what they would have, be different.

§. 23. To conclude this consideration of the imperfection and abuse of language; the *ends of language in our discourse with others* being chiefly these three: *First, to make known* one man's thoughts or *ideas* to another: *secondly, to do it with* as much *ease* and *quickness* as is possible: and *thirdly, thereby to convey* the *knowledge* of things: language is either abused, or deficient, when it fails of any of these three.

The ends of language:
First, To convey our *ideas*.

First, Words fail in the first of these ends, and lay not open one man's *ideas* to another's view: *First*,
When

When men have names in their mouths without any determined *ideas* in their minds, whereof they are the signs: or, *Secondly*, When they apply the common received names of any language to *ideas*, to which the common use of that language does not apply them: or, *Thirdly*, When they apply them very unsteadily, making them stand now for one, and by and by for another *idea*.

Secondly, To do it with quickness. §. 24. *Secondly*, Men fail of conveying their thoughts, with all the quickness and ease that may be, when they have complex *ideas*, without having distinct names for them. This is sometimes the fault of the language itself, which has not in it a sound yet applied to such a signification; and sometimes the fault of the man, who has not yet learned the name for that *idea* he would shew another.

Thirdly, Therewith to convey the knowledge of things. §. 25. *Thirdly*, There is no knowledge of things conveyed by men's words, when their *ideas* agree not to the reality of things. Though it be a defect, that has its original in our *ideas*, which are not so conformable to the nature of things, as attention, study, and application might make them; yet it fails not to extend itself to our words too, when we use them as signs of real beings, which yet never had any reality or existence.

How men's words fail in all these. §. 26. *First*, He that hath words of any language, without distinct *ideas* in his mind, to which he applies them, does, so far as he uses them in discourse, only make a noise without any sense or signification; and how learned soever he may seem by the use of hard words, or learned terms, is not much more advanced thereby in knowledge, than he would be in learning, who had nothing in his study but the bare titles of books, without possessing the contents of them. For all such words, however put into discourse, according to the right construction of grammatical rules, or the harmony

harmony of well-turned periods, do yet amount to nothing but bare sounds, and nothing else.

§. 27. *Secondly*, He that has complex *ideas*, without particular names for them, would be in no better a case than a bookseller, who had in his warehouse volumes that lay there unbound, and without titles; which he could therefore make known to others, only by shewing the loose sheets, and communicate them only by tale. This man is hindered in his discourse for want of words to communicate his complex *ideas*, which he is therefore forced to make known by an enumeration of the simple ones that compose them; and so is fain often to use twenty words to express what another man signifies in one.

§. 28. *Thirdly*, He that puts not constantly the same sign for the same *idea*, but uses the same words sometimes in one, and sometimes in another signification, ought to pass in the schools and conversation for as fair a man, as he does in the market and exchange, who sells several things under the same name.

§. 29. *Fourthly*, He that applies the words of any language to *ideas* different from those to which the common use of that country applies them, however his own understanding may be filled with truth and light, will not by such words be able to convey much of it to others, without defining his terms. For however the sounds are such as are familiarly known, and easily enter the ears of those who are accustomed to them; yet standing for other *ideas* than those they are usually annexed to, and are wont to excite in the mind of the hearers, they cannot make known the thoughts of him who thus uses them.

§. 30. *Fifthly*, He that hath imagined to himself substances such as never have been, and filled his head with *ideas* which have not any correspondence with the real nature of things, to which yet he gives settled and defined names, may fill his discourse, and perhaps another man's head, with the fantastical imagi-

nations of his own brain, but will be very far from advancing thereby one jot in real and true knowledge.

§. 31. He that hath names without *ideas*, wants meaning in his words, and speaks only empty sounds. He that hath complex *ideas* without names for them, wants liberty and dispatch in his expressions, and is necessitated to use periphrases. He that uses his words loosely and unsteadily, will either be not minded, or not understood. He that applies his names to *ideas* different from their common use, wants propriety in his language, and speaks gibberish. And he that hath *ideas* of substances, disagreeing with the real existence of things, so far wants the materials of true knowledge in his understanding, and hath instead thereof *chimeras*.

How in substances.

§. 32. In our notions concerning substances, we are liable to all the former inconveniencies, *v. g.* He that uses the word *tarantula*, without having any imagination or *idea* of what it stands for, pronounces a good word; but so long means nothing at all by it. 2. He that in a new discovered country shall see several sorts of animals and vegetables, unknown to him before, may have as true *ideas* of them, as of a horse or a stag; but can speak of them only by a description, till he shall either take the names the natives call them by, or give them names himself. 3. He that uses the word *body* sometimes for pure extension, and sometimes for extension and solidity together, will talk very fallaciously. 4. He that gives the name of *horse* to that *idea* which common usage calls *mule*, talks improperly, and will not be understood. 5. He that thinks the names *centaur* stands for some real being, imposes on himself, and mistakes words for things.

How in modes and relations.

§. 33. In modes and relations generally we are liable only to the four first of these inconveniencies, (*viz.*) 1. I may have in my memory the names of modes, as *gratitude*, or *charity*, and yet not have any precise *ideas* annexed

annexed in my thoughts to those names. 2. I may have *ideas*, and not know the names that belong to them; *v. g.* I may have the *idea* of a man's drinking, till his colour and humour be altered, till his tongue trips, and his eyes look red, and his feet fail him, and yet not know, that it is to be called *drunkenness*. 3. I may have the *ideas* of virtues or vices, and names also, but apply them amiss: *v. g.* when I apply the name *frugality* to that *idea* which others call and signify by this sound, *covetousness*. 4. I may use any of those names with inconstancy. 5. But in modes and relations, I cannot have *ideas* disagreeing to the existence of things: for modes being complex *ideas*, made by the mind at pleasure; and relation being but my way of considering or comparing two things together, and so also an *idea* of my own making, these *ideas* can scarce be found to disagree with any thing existing; since they are not in the mind, as the copies of things regularly made by nature, nor as properties inseparably flowing from the internal constitution or essence of any substance; but, as it were, patterns lodged in my memory, with names annexed to them, to denominate actions and relations by, as they come to exist. But the mistake is commonly in my giving a wrong name to my conceptions; and so using words in a different sense from other people, I am not understood, but am thought to have wrong *ideas* of them, when I give wrong names to them. Only if I put in my *ideas* of mixed modes or relations, any inconsistent *ideas* together, I fill my head also with *chimeras*; since such *ideas*, if well examined, cannot so much as exist in the mind, much less any real being be ever denominated from them.

§. 34. Since wit and fancy finds easier entertainment in the world, than dry truth and real knowledge, *figurative speeches*, and allusion in language, will hardly be admitted, as an imperfection or *abuse of it*. I confess, in discourses, where we

Seventhly,
Figurative
speech also an
abuse of lan-
guage.

seek rather pleasure and delight than information and improvement, such ornaments as are borrowed from them, can scarce pass for faults. But yet, if we would speak of things as they are, we must allow, that all the art of rhetorick, besides order and clearness, all the artificial and figurative application of words eloquence hath invented, are for nothing else but to insinuate wrong *ideas*, move the passions, and thereby mislead the judgment, and so indeed are perfect cheats: and therefore however laudable or allowable oratory may render them in harangues and popular addresses, they are certainly, in all discourses that pretend to inform or instruct, wholly to be avoided; and where truth and knowledge are concerned, cannot but be thought a great fault, either of the language or person that makes use of them. What, and how various they are, will be superfluous here to take notice; the books of rhetorick which abound in the world, will instruct those who want to be informed. Only I cannot but observe, how little the preservation and improvement of truth and knowledge, is the care and concern of mankind; since the arts of fallacy are endowed and preferred. It is evident how much men love to deceive, and to be deceived, since rhetorick, that powerful instrument of error and deceit, has its established professors, is publickly taught, and has always been had in great reputation: and, I doubt not, but it will be thought great boldness, if not brutality in me to have said thus much against it. *Eloquence*, like the fair sex, has too prevailing beauties in it, to suffer itself ever to be spoken against. And it is in vain to find fault with those arts of deceiving, wherein men find pleasure to be deceived.

C H A P. XI.

Of the Remedies of the foregoing Imperfections and Abuses.

§. 1. **T**HE natural and improved imperfections of languages, we have seen above at large; and speech being the great bond that holds society together, and the common conduit, whereby the improvements of knowledge are conveyed from one man, and one generation to another, it would well deserve our most serious thoughts, to consider what *remedies* are to be found for *these inconveniencies* above-mentioned.

They are worth seeking.

§. 2. I am not so vain to think, that any one can pretend to attempt the perfect *reforming* the *languages* of the world, no not so much as of his own country, without rendering himself ridiculous. To require that men should use their words constantly in the same sense, and for none but determined and uniform *ideas*, would be to think, that all men should have the same notions, and should talk of nothing but what they have clear and distinct *ideas* of. Which is not to be expected by any one, who hath not vanity enough to imagine he can prevail with men to be very knowing or very silent. And he must be very little skilled in the world, who thinks that a voluble tongue shall accompany only a good understanding; or that men's talking much or little, shall hold proportion only to their knowledge.

Are not easy.

§. 3. But though the market and exchange must be left to their own ways of talking, and gossipings not be robbed of their antient privilege; though the schools, and men of argument, would perhaps take it amiss to have any thing offered, to abate the length, or

But yet necessary to philosophy.

lessen the number of their disputes; yet, methinks, those who pretend *seriously* to *search after* or maintain *truth*, should think themselves obliged to study how they might deliver themselves without obscurity, doubtfulness, or equivocation, to which men's words are naturally liable, if care be not taken.

Misuse of
words the
cause of great
errors.

§. 4. For he that shall well consider the *errors* and obscurity, the mistakes and confusion, that are *spread in the world by an ill use of words*, will find some reason to doubt, whether language, as it has been employed, has contributed more to the improvement or hindrance of knowledge amongst mankind. How many are there, that when they would think on things, fix their thoughts only on words, especially when they would apply their minds to moral matters? And who then can wonder, if the result of such contemplations and reasonings, about little more than sounds, whilst the *ideas* they annexed to them, are very confused, or very unsteady, or perhaps none at all; who can wonder, I say, that such thoughts and reasonings end in nothing but obscurity and mistake, without any clear judgment or knowledge?

Obstinacy.

§. 5. This inconvenience, in an ill use of words, men suffer in their own private meditations; but much more manifest are the disorders which follow from it, in conversation, discourse, and arguings with others. For language being the great conduit whereby men convey their discoveries, reasonings, and knowledge from one to another, he that makes an ill use of it, though he does not corrupt the fountains of knowledge, which are in things themselves; yet he does, as much as in him lies, break or stop the pipes, whereby it is distributed to the publick use and advantage of mankind. He that uses words without any clear and steady meaning, what does he but lead himself and others into errors? And he that designedly does it, ought to be looked on as an enemy to truth and knowledge. And yet

yet who can wonder, that all the sciences and parts of knowledge, have been so over-charged with obscure and equivocal terms, and insignificant and doubtful expressions, capable to make the most attentive or quick-sighted, very little or not at all the more knowing or orthodox; since subtlety in those who make profession to teach or defend truth, hath passed so much for a virtue. A virtue, indeed, which consisting for the most part, in nothing but the fallacious and illusory use of *obscure* or *deceitful terms*, is only fit to *make men* more conceited in their ignorance, and *obstinate* in their errors.

§. 6. Let us look into the books of controversy of any kind, there we shall see, And wrangling. that the effect of obscure, unsteady or equivocal terms, is nothing but noise and wrangling about sounds without convincing or bettering a man's understanding. For if the *idea* be not agreed on, betwixt the speaker and hearer, for which the words stand, the argument is not about things, but names. As often as such a word, whose signification is not ascertained betwixt them, comes in use, their understandings have no other object wherein they agree, but barely the sound; the things that they think on at that time, as expressed by that word, being quite different.

§. 7. Whether a *bat* be a *bird*, or no, is not a question; whether a *bat* be another thing than indeed it is, or have other qualities than indeed it has, for that would be extremely absurd to doubt of; but the question is, 1. Either between those that acknowledged themselves to have but imperfect *ideas* of one or both of those sort of things, for which these names are supposed to stand; and then it is a real enquiry concerning the nature of a *bird* or a *bat*, to make their yet imperfect *ideas* of it more complete, by examining, whether all the simple *ideas*, to which, combined together, they both give the name *bird*, be all to be found in a *bat*; but this is a Instance, *bat* and *bird*.

question only of enquirers, (not disputers) who neither affirm, nor deny, but examine: or, 2. It is a question between disputants, whereof the one affirms, and the other denies, that a *bat* is a *bird*. And then the question is barely about the signification of one, or both these words; in that they not having both the same complex *ideas*, to which they give these two names; one holds, and the other denies, that these two names may be affirmed one of another. Were they agreed in the signification of these two names, it were impossible they should dispute about them. For they would presently and clearly see, (were that adjusted between them) whether all the simple *ideas*, of the more general name *bird*, were found in the complex *idea* of a *bat*, or no; and so there could be no doubt whether a *bat* were a *bird* or no. And here I desire it may be considered, and carefully examined, whether the greatest part of the disputes in the world are not merely verbal, and about the signification of words; and whether if the terms they are made in, were defined, and reduced in their signification (as they must be, where they signify any thing) to determined collections of the simple *ideas* they do or should stand for, those disputes would not end of themselves, and immediately vanish. I leave it then to be considered, what the learning of disputation is, and how well they are employed for the advantage of themselves, or others, whose business is only the vain ostentation of sounds, *i. e.* those who spend their lives in disputes and controversies. When I shall see any of those combatants strip all his terms of ambiguity and obscurity, (which every one may do in the words he uses himself) I shall think him a champion for knowledge, truth, and peace, and not the slave of vain-glory, ambition, or a party.

§. 8. *To remedy the defects of speech* before-mentioned, to some degree, and to prevent the inconveniencies that follow from them, I imagine the observation of the following rules may be of use, till
somebody

somebody better able shall judge it worth his while, to think more maturely on this matter, and oblige the world with his thoughts on it.

First, A man should take care *to use no word without a signification*, no name without an *idea* for which he makes it stand. This rule will not seem altogether needless, to any one who shall take the pains to recollect how often he has met with such words, as *instinct*, *sympathy*, and *antipathy*, &c. in the discourse of others, so made use of, as he might easily conclude, that those that used them had no *ideas* in their minds to which they applied them; but spoke them only as sounds, which usually served instead of reasons, on the like occasions. Not but that these words, and the like, have very proper significations in which they may be used; but there being no natural connexion between any words, and any *ideas*, these, and any other, may be learned by rote, and pronounced or writ by men who have no *ideas* in their minds, to which they have annexed them, and for which they make them stand; which is necessary they should, if men would speak intelligibly even to themselves alone.

First remedy,
to use no word
without an
idea.

§. 9. *Secondly*, It is not enough a man *uses his words as signs of some ideas*, those *ideas* he annexes them to, if they be *simple*, must be clear and distinct; if *complex*, must be *determinate*, i. e. the precise collection of simple *ideas* settled in the mind, with that sound annexed to it, as the sign of that precise determined collection, and no other. This is very necessary in names of modes, and especially moral words; which having no settled object in nature, from whence their *ideas* are taken, as from their original, are apt to be very confused. *Justice* is a word in every man's mouth, but most commonly with a very undetermined loose signification: which will always be so, unless a man has in his mind a distinct comprehension

Secondly, to
have distinct
ideas annexed
to them in
modes.

comprehension of the component parts, that complex *idea* consists of; and if it be decomposed, must be able to resolve it still on, till he at last comes to the simple *ideas* that make it up: and unless this be done, a man makes an ill use of the word, let it be *justice*, for example, or any other. I do not say, a man need stand to recollect, and make this analysis at large every time the word *justice* comes in his way: but this, at least, is necessary, that he have so examined the signification of that name, and settled the *idea* of all its parts in his mind, that he can do it when he pleases. If one who makes his complex *idea* of *justice*, to be such a treatment of the person or goods of another, as is according to law, hath not a clear and distinct *idea* what *law* is, which makes a part of his complex *idea* of justice, it is plain, his *idea* of justice itself, will be confused and imperfect. This exactness will, perhaps, be judged very troublesome; and therefore most men will think they may be excused from settling the complex *ideas* of mixed modes so precisely in their minds. But yet I must say, till this be done, it must not be wondered, that they have a great deal of obscurity and confusion in their own minds, and a great deal of wrangling in their discourses with others.

And distinct
and conform-
able in sub-
stances.

§. 10. In the names of *substances*, for a right use of them, something more is required than barely *determined ideas*: in these *the names must also be conformable to things*, as they exist: but of this I shall have occasion to speak more at large by and bye. This exactness is absolutely necessary in enquiries after philosophical knowledge, and in controversies about truth. And though it would be well too, if it extended itself to common conversation, and the ordinary affairs of life; yet I think that is scarce to be expected. Vulgar notions suit vulgar discourses; and both, though confused enough, yet serve pretty well the market, and the wake. Merchants and lovers, cooks and taylors, have words wherewithal

wherewithal to dispatch their ordinary affairs; and so, I think, might philosophers and disputants too, if they had a mind to understand, and to be clearly understood.

§. 11. *Thirdly*, It is not enough that men have *ideas*, determined *ideas*, for which they make these signs stand; but they *must* also take care to *apply their words*, as near as may be, to *such ideas as common use has annexed them to*. For words, especially of languages already framed, being no man's private possession, but the common measure of commerce and communication, it is not for any one, at pleasure, to change the stamp they are current in; nor alter the *ideas* they are affixed to; or at least when there is a necessity to do so, he is bound to give notice of it. Men's intentions in speaking are, or at least should be, to be understood; which cannot be without frequent explanations, demands, and other the like incommodious interruptions, where men do not follow common use. Propriety of speech, is that which gives our thoughts entrance into other men's minds with the greatest ease and advantage; and therefore deserves some part of our care and study, especially in the names of moral words. The proper signification and use of terms, is best to be learned from those, who in their writings and discourses, appear to have had the clearest notions, and applied to them their terms with the exactest choice and fitness. This way of using a man's words, according to the propriety of the language, though it have not always the good fortune to be understood; yet most commonly leaves the blame of it on him, who is so unskilful in the language he speaks as not to understand it, when made use of as it ought to be.

Thirdly, Propriety.

§. 12. *Fourthly*, But because common use has not so visibly annexed any signification to words, as to make men know always certainly what they precisely stand for: and because men in the improvement of their knowledge, come to have *ideas* different from the vulgar and

Fourthly, to make known their meaning.

and ordinary received ones, for which they must either make new words, (which men seldom venture to do, for fear of being thought guilty of affectation or novelty,) or else must use old ones, in a new signification. Therefore, after the observation of the foregoing rules, it is sometimes necessary for the ascertaining the signification of words, to *declare their meaning*; where either common use has left it uncertain and loose, (as it has in most names of very complex *ideas*) or where the term, being very material in the discourse, and that upon which it chiefly turns, is liable to any doubtfulness or mistake.

And that
three ways.

§. 23. As the *ideas* men's words stand for are of different sorts; so the way of making known the *ideas* they stand for, when there is occasion, is also different. For though defining be thought the proper way to make known the proper signification of words; yet there are some words that will not be defined, as there are others, whose precise meaning cannot be made known, but by definition; and, perhaps, a third, which partake somewhat of both the other, as we shall see in the names of simple *ideas*, modes and substances.

First, In simple *ideas* by synonymous terms or shewing.

§. 14. *First*, When a man makes use of the name of any simple idea, which he perceives is not understood, or is in danger to be mistaken, he is obliged, by the laws of ingenuity, and the end of speech, to declare his meaning, and make known what *idea* he makes it stand for. This, as has been shewn, cannot be done by definition; and therefore, when a synonymous word fails to do it, there is but one of these ways left. *First*, Sometimes the naming the subject, wherein that simple idea is to be found, will make its name be understood by those who are acquainted with that subject, and know it by that name. So to make a countryman understand what a *feuille morte* colour signifies, it may suffice to tell him, it is the colour of withered leaves falling in autumn. *Secondly*, But the only

only sure way of making known the signification of the name of any simple *idea*, is, by *presenting to his senses that subject which may produce it in his mind*, and make him actually have the *idea* that word stands for.

§. 15. *Secondly, Mixed modes*, especially those belonging to morality, being most of them such combinations of *ideas* as the mind puts together of its own choice; and whereof there are not always standing patterns to be found existing, the signification of their names cannot be made known, as those of simple *ideas*, by any shewing; but in recompence thereof, may be perfectly and exactly *defined*. For they being combinations of several *ideas* that the mind of man has arbitrarily put together, without reference to any archetypes, men may, if they please, exactly know the *ideas* that go to each composition, and so both use these words in a certain and undoubted signification, and perfectly declare, when there is occasion, what they stand for. This, if well considered, would lay great blame on those who make not their discourses about moral things very clear and distinct. For since the precise signification of the names of mixed modes, or, which is all one, the real essence of each species, is to be known, they being not of Nature's, but of man's making, it is a great negligence and perverseness to discourse of moral things with uncertainty and obscurity, which is more pardonable in treating of natural substances, where doubtful terms are hardly to be avoided, for a quite contrary reason, as we shall see by and by.

Secondly, In mixed modes, by definition.

§. 16. Upon this ground it is, that I am bold to think, that *morality is capable of demonstration*, as well as mathematicks: since the precise real essence of the things moral words stand for, may be perfectly known; and so the congruity or incongruity of the things themselves be certainly discovered, in which consists perfect knowledge. Nor let any one object, that the names of substances are often to be made use of in morality,

Morality capable of demonstration.

rality, as well as to those of modes, from which will arise obscurity. For as to substances, when concerned in moral discourses, their diverse natures are not so much enquired into, as supposed; *v. g.* when we say that *man is subject to law*; we mean nothing by *man*, but a corporeal rational creature: what the real essence or other qualities of that creature are in this case, is no way considered. And therefore, whether a child or changeling be a man in a physical sense, may amongst the naturalists be as disputable as it will, it concerns not at all the *moral man*, as I may call him, which is this immoveable unchangeable *idea, a corporeal rational being*. For were there a monkey, or any other creature to be found, that had the use of reason to such a degree, as to be able to understand general signs, and to deduce consequences about general *ideas*, he would no doubt be subject to law, and in that sense, be a *man*, how much soever he differed in shape from others of that name. The names of substances, if they be used in them, as they should, can no more disturb moral than they do mathematical discourses: where, if the mathematician speaks of a *cube* or *globe* of *gold*, or any other body, he has his clear settled *idea* which varies not, though it may by mistake be applied to a particular body to which it belongs not.

Definitions
can make moral
discourses
clear.

§. 17. This I have here mentioned by the bye to shew of what consequence it is for men, in their names of mixed modes, and consequently in all their moral discourses, to define their words when there is occasion: since thereby moral knowledge may be brought to so great clearness and certainty. And it must be great want of ingenuity, (to say no worse of it) to refuse to do it: since a *definition is the only way, whereby the precise meaning of moral words can be known*; and yet a way, whereby their meaning may be known *certainly*, and without leaving any room for any contest about it. And therefore the negligence or perverseness of mankind cannot be excused, if their discourses

in

in morality be not much more clear, than those in natural philosophy; since they are about *ideas* in the mind, which are none of them false or disproportionate; they having no external beings for the *archetypes* which they are referred to, and must correspond with. It is far easier for men to frame in their minds an *idea*, which shall be the standard to which they will give the name *justice*, with which pattern so made, all actions that agree shall pass under that denomination, than, having seen *Aristides*, to frame an *idea* that shall in all things be exactly like him, who is as he is, let men make what *idea* they please of him. For the one, they need but know the combination of *ideas* that are put together within their own minds; for the other, they must enquire into the whole nature, and abstruse hidden constitution, and various qualities of a thing existing without them.

§. 18. Another reason that makes the defining of mixed modes so necessary, especially of moral words, is what I mentioned a little before, viz. That it is *the only way whereby the signification of the most of them can be known with certainty*. For the *ideas* they stand for, being for the most part such, whose component parts nowhere exist together, but scattered and mingled with others, it is the mind alone that collects them, and gives them the union of one *idea*: and it is only by words enumerating the several simple *ideas* which the mind has united, that we can make known to others what their names stand for; the assistance of the senses in this case not helping us, by the proposal of sensible objects, to shew the *ideas*, which our names of this kind stand for, as it does often in the names of sensible simple *ideas*, and also to some degree in those of substances.

And is the only way.

§. 19. Thirdly, For the explaining the signification of the names of substances, as they stand for the *ideas* we have of their distinct species, both the forementioned ways, viz. of shewing and defining, are requisite, in many

Thirdly, In substances, by shewing and defining.

many cases, to be made use of. For there being ordinarily in each sort some leading qualities, to which we suppose the other *ideas*, which make up our complex *idea* of that species annexed; we forwardly give the specifick name to that thing, wherein that characteristical mark is found, which we take to be the most distinguishing *idea* of that species. These leading or characteristical (as I may so call them) *ideas* in the sorts of animals and vegetables, is (as has been before remarked, *Chap. VI. §. 29.* and *Chap. IX. §. 15.*) mostly figure, and in inanimate bodies colour, and in some both together. Now,

Ideas of the leading qualities of substances, are best got by shewing.

§. 20. These *leading sensible qualities* are those which make *the chief ingredient of our specifick ideas*, and consequently the most observable and unvariable part in the definitions of our specifick names, as attributed to sorts of *substances* coming under our knowledge. For though the sound *man*, in its own nature, be as apt to signify a complex *idea* made up of animality and rationality, united in the same subject, as to signify any other combination; yet used as a mark to stand for a sort of creatures we count of our own kind, perhaps the outward shape is as necessary to be taken into our complex *idea* signified by the word *man*, as any other we find in it; and therefore why *Plato's animal implume bipes latis unguibus*, should not be a good definition of the name *man*, standing for that sort of creatures, will not be easy to shew: for it is the shape, as the leading quality, that seems more to determine that species, than a faculty of reasoning, which appears not at first, and in some never. And if this be not allowed to be so, I do not know how they can be excused from murder, who kill monstrous births, (as we call them) because of an unordinary shape, without knowing whether they have a rational soul or no; which can be no more discerned in a well-formed, than ill-shaped infant, as soon as born. And who is it has informed us, that a rational
soul

soul can inhabit no tenement, unless it has just such a sort of frontispiece, or can join itself to, and inform, no sort of body, but one that is just of such an outward structure?

§. 21. Now *these leading qualities are best made known by shewing*, and can hardly be made known otherwise. For the shape of an *horse*, or *cassuary*, will be but rudely and imperfectly imprinted on the mind by words, the sight of the animals doth it a thousand times better: and the *idea* of the particular colour of *gold* is not to be got by any description of it, but only by the frequent exercise of the eyes about it, as is evident in those who are used to this metal, who will frequently distinguish true from counterfeit, pure from adulterate, by the sight; where others (who have as good eyes, but yet, by use, have not got the precise nice *idea* of that peculiar yellow) shall not perceive any difference. The like may be said of those other simple *ideas* peculiar in their kind to any substance; for which precise *ideas*, there are no peculiar names. The particular ringing sound there is in *gold*, distinct from the sound of other bodies, has no particular name annexed to it, no more than the particular yellow that belongs to that metal.

§. 22. But because many of the simple *ideas* that make up our specifick *ideas* of substances, are powers which lie not obvious to our senses in the things as they ordinarily appear; therefore, in the signification of our names of substances, some part of the signification will be better made known by enumerating those simple *ideas*, than in shewing the substance itself. For he that, to the yellow shining colour of *gold* got by sight, shall, from my enumerating them, have the *ideas* of great ductility, fusibility, fixedness, and solubility in *aqua regia*, will have a perfecter *idea* of *gold*, than he can have by seeing a piece of *gold*, and thereby imprinting in his mind only its obvious qualities. But if the former constitution of this shining, heavy, ductile thing, (from whence all these its properties flow) lay open

The *ideas* of their powers, best by definitions.

to our senses as the formal constitution, or essence of a triangle does, the signification of the word *gold* might as easily be ascertained as that of *triangle*.

A reflection
on the know-
ledge of spi-
rits.

§. 23. Hence we may take notice, how much the foundation of all *our knowledge of corporeal things lies in our senses*. For how spirits, separate from bodies, (whose knowledge, and *ideas* of these things, are certainly much more perfect than ours) know them, we have no notion, no *idea* at all. The whole extent of our knowledge, or imagination, reaches not beyond our own *ideas*, limited to our ways of perception. Though yet it be not to be doubted, that spirits of a higher rank than those immersed in flesh, may have as clear *ideas* of the radical constitution of substances, as we have of a triangle, and so perceive how all their properties and operations flow from thence: but the manner how they come by that knowledge, exceeds our conceptions.

Ideas also of
substances
must be con-
formable to
things.

§. 24. But though definitions will serve to explain the names of substances, as they stand for our *ideas*; yet they leave them not without great imperfection, as they stand for things. For our names of substances being not put barely for our *ideas*, but being made use of ultimately to represent things, and so are put in their place, their signification must agree with the truth of things, as well as with men's *ideas*. And therefore in substances, we are not always to rest in the ordinary complex *idea*, commonly received as the signification of that word, but must go a little farther, and enquire into the nature and properties of the things themselves, and thereby perfect, as much as we can, our *ideas* of their distinct species; or else learn them from such as are used to that sort of things, and are experienced in them. For since it is intended their names should stand for such collections of simple *ideas* as do really exist in things themselves, as well as for the complex *idea* in other men's minds, which in their ordinary acceptation they stand for:
therefore

therefore to *define their names right, natural history is to be enquired into*; and their properties are, with care and examination, to be found out. For it is not enough, for the avoiding inconveniencies in discourses and arguings about natural bodies and substantia things, to have learned from the propriety of the language, the common, but confused, or very imperfect *idea*, to which each word is applied, and to keep them to that *idea* in our use of them: but we must, by acquainting ourselves with the history of that sort of things, rectify and settle our complex *idea* belonging to each specifick name; and in discourse with others, (if we find them mistake us) we ought to tell what the complex *idea* is, that we make such a name stand for. This is the more necessary to be done by all those who search after knowledge, and philosophical verity, in that children being taught words whilst they have but imperfect notions of things, apply them at random, and without much thinking, and seldom frame determined *ideas* to be signified by them. Which custom, (it being easy, and serving well enough for the ordinary affairs of life and conversation) they are apt to continue, when they are men: and so begin at the wrong end, learning words first, and perfectly, but make the notions to which they apply those words afterwards, very overtly. By this means it comes to pass, that men, speaking the proper language of their country, *i. e.* according to grammar rules of that language, do yet speak very improperly of things themselves, and by their arguing one with another, make but small progress in the discoveries of useful truths, and the knowledge of things, as they are to be found in themselves, and not in our imaginations; and it matters not much, for the improvement of our knowledge, how they are called.

§. 25. It were therefore to be wished, that men versed in physical enquiries, and acquainted with the several sorts of natural bodies, would set down those simple *ideas*, wherein

Not easy to be made so.

they observe the individuals of each sort constantly to agree. This would remedy a great deal of that confusion which comes from several persons, applying the same name to a collection of a smaller or greater number of sensible qualities, proportionably as they have been more or less acquainted with, or accurate in examining the qualities of any sort of things, which come under one denomination. But a dictionary of this sort, containing, as it were, a natural history, requires too many hands, as well as too much time, cost, pains and sagacity, ever to be hoped for; and till that be done, we must content ourselves with such definitions of the names of substances, as explain the sense men use them in. And it would be well, where there is occasion, if they would afford us so much. This yet is not usually done; but men talk to one another, and dispute in words, whose meaning is not agreed between them, out of a mistake, that the signification of common words are certainly established, and the precise *ideas* they stand for, perfectly known; and that it is a shame to be ignorant of them. Both which suppositions are false: no names of complex *ideas* having so settled determined significations, that they are constantly used for the same precise *ideas*. Nor is it a shame for a man not to have a certain knowledge of any thing, but by the necessary ways of attaining it; and so it is no discredit not to know what precise *idea* any sound stands for in another man's mind, without he declare it to me by some other way than barely using that sound, there being no other way, without such a declaration, certainly to know it. Indeed the necessity of communication by language, brings men to an agreement in the signification of common words, within some tolerable latitude, that may serve for ordinary conversation; and so a man cannot be supposed wholly ignorant of the *ideas* which are annexed to words by common use, in a language familiar to him. But common use, being but a very uncertain rule, which reduces itself at last to the *ideas* of particular

men, proves often but a very variable standard. But though such a dictionary, as I have above-mentioned, will require too much time, cost, and pains, to be hoped for in this age; yet, methinks, it is not unreasonable to propose, that words standing for things, which are known and distinguished by their outward shapes, should be expressed by little draughts and prints made of them. A vocabulary made after this fashion, would, perhaps with more ease, and in less time, teach the true signification of many terms, especially in languages of remote countries or ages, and settle truer *ideas* of men's minds of several things, whereof we read the names in ancient authors, than all the large and laborious comments of learned critics. Naturalists, that treat of plants and animals, have found the benefit of this way: and he that has had occasion to consult them, will have reason to confess, that he has a clearer *idea* of *apium* or *ibex*, from a little print of that herb, or beast, than he could have from a long definition of the names of either of them. And so, no doubt, he would have of *strigil* and *sistrum*, if instead of a *currycomb* and *cymbal*, which are the *English* names dictionaries render them by, he could see stamped in the margin, small pictures of these instruments, as they were in use amongst the ancients. *Toga*, *tunica*, *pallium*, are words easily translated by *gown*, *coat*, and *cloak*; but we have thereby no more true *ideas* of the fashion of those habits amongst the *Romans*, than we have of the faces of the taylor's who made them. Such things as these, which the eye distinguishes by their shapes, would be best let into the mind by draughts made of them, and more determine the signification of such words, than any other words set for them, or made use of to define them. But this only by the bye.

§. 26. *Fifthly*, If men will not be at the pains to declare the meaning of their words, and definitions of their terms are not to be had; yet this is the least that can

Fifthly, By
constancy in
their signifi-
cation.

be expected, that in all discourses, wherein one man pretends to instruct or convince another, he should *use the same word constantly in the same sense*: if this were done, (which nobody can refuse without great dissimilarity) many of the books extant might be spared; many of the controversies in dispute would be at an end; several of those great volumes, swollen with ambiguous words, now used in one sense, and by and bye in another, would shrink into a *very* narrow compass, and many of the philosophers (to mention no other) as well as poets works, might be contained in a nut-shell.

When the variation is to be explained.

§. 27. But after all, the provision of words is so scanty in respect of that infinite variety of thoughts, that men, wanting terms to suit their precise notions, will notwithstanding their utmost caution, be forced often to use the same word, in somewhat different senses. And though in the continuation of a discourse, or the pursuit of an argument, there be hardly room to digress into a particular definition, as often as a man varies the signification of any term; yet the import of the discourse will, for the most part, if there be no designed fallacy, sufficiently lead candid and intelligent readers, into the true meaning of it: but where that is not sufficient to guide the reader, there it concerns the writer to explain his meaning, and shew in what sense he there uses that term.

B O O K IV.

C H A P. I.

Of Knowledge in General.

Our knowledge conversant about our ideas,

§. 1. **S**INCE *the mind*, in all its thoughts and reasonings, hath no other immediate object but its own *ideas*, which it alone does or can contemplate;

plate; it is evident, that our knowledge is only conversant about them.

§. 2. *Knowledge* then seems to me to be nothing but *the perception of the connexion and agreement, or disagreement and repugnancy of any of our ideas*. In this alone it consists. Where this perception is, there is knowledge; and where it is not, there, though we may fancy, guess, or believe, yet we always come short of knowledge. For, when we know that *white is not black*, what do we else but perceive, that these two *ideas* do not agree? When we possess ourselves with the utmost security of the demonstration, that *the three angles of a triangle are equal to two right ones*; what do we more but perceive, that equality to two right ones does necessarily agree to, and is inseparable from, the three angles of a triangle *?

Knowledge is the perception of the agreement or disagreement of two ideas.

§. 3.

* The placing of certainty, as Mr. *Locke* does, in the perception of the agreement or disagreement of our ideas, the Bishop of *Worcester* suspects may be of dangerous consequence to that article of faith which he has endeavoured to defend; to which Mr. *Locke* answers, † since your Lordship hath not, as I remember, shewn, or gone about to shew, how this proposition, viz. that certainty consists in the perception of the agreement or disagreement of two ideas, is opposite or inconsistent with that article of faith which your Lordship has endeavoured to defend; it is plain, it is but your Lordship's fear, that it may be of dangerous consequence to it, which, as I humbly conceive, is no proof that it is any way inconsistent with that article.

† In his 2d letter to the Bishop of *Worcester*, p. 83, &c.

Nobody, I think, can blame your Lordship, or any one else, for being concerned for any article of the Christian faith; but if that concern (as it may, and as we know it has done) makes any one apprehend danger, where no danger is, are we, therefore, to give up and condemn any proposition, because any one, though of the first rank and magnitude, fears it may be of dangerous consequence to any truth of religion, without shewing that it is so? If such fears be the measures whereby to judge of truth and falshood, the affirming that there are antipodes would be still a heresy; and the doctrine of the motion of the earth must be rejected, as overthrowing the truth of the scripture; for of that dangerous consequence it has been apprehended to be, by many learned and pious divines,

This agree-
ment forefold.

§. 3. But to understand a little more distinctly, wherein this agreement or disagreement consists, I think we may reduce it all to these four sorts:

1. *Identity, or diversity.*
2. *Relation.*
3. *Co-existence, or necessary connexion.*
4. *Real existence.*

First, Of iden-
tity, or diver-
sity.

§. 4. *First*, As to the first sort of agreement or disagreement, *viz. identity or diversity*. It is the first act of the mind, when it has any sentiments or *ideas* at all, to perceive its *ideas*, and so far as it perceives them, to know each what it is, and thereby also to perceive their difference, and that one is not another. This is so absolutely necessary, that without it there could

out of their great concern for religion. And yet, notwithstanding those great apprehensions of *what dangerous consequence it might be*, it is now universally received by learned men, as an undoubted truth; and writ for by some, whose belief of the scripture is not at all questioned; and particularly, very lately, by a divine of the church of *England*, with great strength of reason, in his wonderfully ingenious *New Theory of the Earth*.

The reason your Lordship gives of your fears, that *it may be of such dangerous consequence to that article of faith which your Lordship endeavours to defend*, though it occur in more places than one, is only this, *viz. That it is made use of by ill men to do mischief, i. e. to oppose that article of faith which your Lordship hath endeavoured to defend*. But, my Lord, if it be a reason to lay by any thing as bad, because it is, or may be used to an ill purpose, I know not what will be innocent enough to be kept. Arms, which were made for our defence, are sometimes made use of to do *mischief*; and yet they are not thought of *dangerous consequence* for all that. Nobody lays by his sword and pistols, or thinks them of such *dangerous consequence* as to be neglected, or thrown away, because robbers, and the worst of men, sometimes make use of them, to take away honest men's lives or goods. And the reason is, because they were designed, and will serve to preserve them. And who knows but this may be the present case? If your Lordship thinks, that placing of certainty in the perception of the agreement or disagreement of ideas be to be rejected as false, because you apprehend *it may be of dangerous consequence to that article of faith*: on the other side, perhaps others, with me, may think it

could be no knowledge, no reasoning, no imagination, no distinct thoughts at all. By this the mind clearly and infallibly perceives each *idea* to agree with itself, and to be what it is; and all distinct *ideas* to disagree, *i. e.* the one not to be the other: and this it does without pains, labour, or deduction; but at first view, by its natural power of perception and distinction. And though men of art have reduced this into those general rules, *What is, is*; and *it is impossible for the same thing to be, and not to be*; for ready application in all cases, wherein there may be occasion to reflect on it; yet it is certain, that the first exercise of this faculty is about particular *ideas*. A man infallibly knows, as soon as ever he has them in his mind, that the *ideas* he calls *white* and *round*, are the very *ideas* they are; and that they are not other *ideas* which he
calls

a defence against error, and so (as being of good use) to be received and adhered to.

I would not, my Lord, be hereby thought to set up my own, or any one's judgment against your Lordship's. But I have said this only to shew, while the argument lies for or against the truth of any proposition, barely in an imagination that *it may be* of consequence to the supporting or overthrowing of any remote truth; it will be impossible, that way, to determine of the truth or falshood of that proposition. For imagination will be set up against imagination, and the stronger probably will be against your Lordship; the strongest imaginations being usually in the weakest heads. The only way, in this case, to put it past doubt, is to shew the inconsistency of the two propositions; and then it will be seen, that one overthrows the other; the true, the false one.

Your Lordship says indeed, this is a *new method of certainty*. I will not say so myself, for fear of deserving a second reproof from your Lordship, for being too forward to assume to myself the *honour of being an original*. But this, I think, gives me occasion, and will excuse me from being thought impertinent, if I ask your Lordship, whether there be any other, or older *method of certainty*? and what it is? For, if there be no other, nor older than this, either this was always the *method of certainty*, and so mine is no *new* one; or else the world is obliged to me for this *new* one, after having been so long in the want of so necessary a thing as a *method of certainty*. If there be an older, I am sure your Lordship cannot but know it; your condemning mine as *new*, as well as your thorough insight into antiquity, cannot but satisfy every body that you do. And therefore to set the world right in a thing of that great
concernment,

calls *red* or *square*. Nor can any maxim or proposition in the world make him know it clearer or surer than he did before, and without any such general rule. This then is the first agreement or disagreement, which the mind perceives in its *ideas*; which it always perceives at first sight: and if there ever happen any doubt about it, it will always be found to be about the names, and not the *ideas* themselves, whose identity and diversity will always be perceived as soon and as clearly as the *ideas* themselves are; nor can it possibly be otherwise.

Secondly, Relative.

§. 5. *Secondly*, The next sort of agreement or disagreement, the mind perceives in any of its *ideas*, may, I think, be called *relative*, and is nothing but *the perception of the relation*

concernment, and to overthrow mine, and thereby prevent the dangerous consequence there is in my having unreasonably *started it*, will not, I humbly conceive, misbecome your Lordship's care of that *article you have endeavoured to defend*, nor the good-will you bear to truth in general. For I will be answerable for myself, that I shall; and I think I may be for all others, that they all will give off the placing of certainty in the perception of the agreement or disagreement of ideas, if your Lordship will be pleased to shew, that it lies in any thing else.

But truly, not to ascribe to myself an invention of what has been as old as knowledge is in the world, I must own, I am not guilty of what your Lordship is pleased to call *starting new methods of certainty*. Knowledge, ever since there has been any in the world, has consisted in one particular action of the mind; and so, I conceive, will continue to do to the end of it. And to *start new methods of knowledge, or certainty*, (for they are to me the same thing) *i. e.* to find out and propose new methods of attaining knowledge, either with more ease and quickness, or in things yet unknown, is what I think nobody could blame: but this is not that which your Lordship here means, by *new methods of certainty*. Your Lordship, I think, means by it, the placing of *certainty* in something, wherein either it does not consist, or else wherein it was not placed before now; if this be to be called a *new method of certainty*. As to the latter of these, I shall know whether I am guilty or no, when your Lordship will do me the favour to tell me, wherein it was placed before: which your Lordship knows I professed myself ignorant of, when I writ my book, and so I am still. But if *starting new methods of certainty*, be the placing of certainty in something

tion between any two ideas, of what kind soever, whether substances, modes, or any other. For, since all distinct *ideas* must eternally be known not to be the same, and so be universally and constantly denied one of another, there could be no room for any positive knowledge at all, if we could not perceive any relation between our *ideas*, and find out the agreement or disagreement they have one with another, in several ways the mind takes of comparing them.

§. 6. *Thirdly*, The third sort of agreement or disagreement to be found in our *ideas*, which the perception of the mind is employed about, is *co-existence*, or *non-co-existence*, in the same subject; and this belongs particularly to substances. Thus, when we pronounce concerning *gold*,
Thirdly, Of
co-existence.
that

thing wherein it does not consist; whether I have done that or no, I must appeal to the experience of mankind.

There are several actions of men's minds, that they are conscious to themselves of performing, as *willing*, *believing*, *knowing*, &c. which they have so particular sense of, that they can distinguish them one from another; or else they could not say, when they *willed*, when they *believed*, and when they *knew* any thing. But though these actions were different enough from one another, not to be confounded by those who spoke of them, yet nobody, that I had met with, had, in their writings, particularly set down wherein the act of *knowing* precisely consisted.

To this reflection upon the actions of my own mind the subject of my *Essay concerning Human Understanding* naturally led me; wherein if I have done any thing *new*, it has been to describe to others, more particularly than had been done before, what it is their minds do when they perform that action which they call *knowing*; and if, upon examination, they observe I have given a true account of that action of their minds in all the parts of it, I suppose it will be in vain to dispute against what they find and feel in themselves. And if I have not told them right and exactly what they find and feel in themselves, when their minds perform the act of knowing, what I have said will be all in vain; men will not be persuaded against their senses. Knowledge is an internal perception of their minds; and if, when they reflect on it, they find it is not what I have said it is, my groundless conceit will not be hearkened to, but be exploded by every body, and die of itself: and nobody need to be at any pains to drive it out of the world. So impossible

is

that it is fixed, our knowledge of this truth amounts to no more but this, that fixedness, or a power to remain in the fire unconsumed, is an *idea* that always accompanies, and is joined with that particular sort of yellowness, weight, fusibility, malleableness, and solubility in *aqua regia*, which make our complex *idea* signified by the word *gold*.

Fourthly, Of real existence: §. 7. *Fourthly*, The fourth and last sort is, that of *actual real existence* agreeing to any *idea*. Within these four sorts of agreement or disagreement, is, I suppose, contained all the knowledge we have, or are capable of: for all the enquiries that we can make concerning any of our *ideas*, all that we know or can affirm concerning any of them, is, that it is, or is not the same with some other; that it does, or does not always co-exist with some other *idea* in

is it to find out, or start *new methods of certainty*, or to have them received, if any one places it in any thing, but in that wherein it really consists: much less can any one be in danger to be misled into error, by any such *new*, and to every one visibly senseless project. Can it be supposed, that any one could *start a new method of seeing*, and persuade men thereby, that they do not see what they do see? Is it to be feared, that any one can cast such a mist over their eyes, that they should not know when they see, and so be led out of their way by it?

Knowledge, I find in myself, and I conceive in others, consists in the perception of the agreement or disagreement of the immediate objects of the mind in thinking, which I call *ideas*: but whether it does so in others or no, must be determined by their own experience, reflecting upon the action of their mind in knowing; for that I cannot alter, nor, I think, they themselves. But whether they will call those immediate objects of their minds in thinking *ideas* or no, is perfectly in their own choice. If they dislike that name, they may call them *notions* or *conceptions*, or how they please; it matters not, if they use them so as to avoid obscurity and confusion. If they are constantly used in the same and a known sense, every one has the liberty to please himself in his *terms*; there lies neither truth, nor error, nor science, in that; though those that take them for things, and not for what they are, bare arbitrary signs of our *ideas*, make a great deal ado often about them; as if some great matter lay in the use of this or that sound. All that I know, or can imagine of difference about them, is, that those words are always best, whose significations are best known

In the same subject; that it has this or that relation to some other *idea*; or that it has a real existence without the mind. Thus *blue is not yellow*, is of identity: *two triangles upon equal bases, between two parallels, are equal*, is of relation; *iron is susceptible of magnetical impressions*, is of co-existence: *GOD is*, is of real existence. Though identity and co-existence are truly nothing but relations, yet they are so peculiar ways of agreement or disagreement of our *ideas*, that they deserve well to be considered as distinct heads, and not under relation in general; since they are so different grounds of affirmation and negation, as will easily appear to any one who will but reflect on what is said in several places of this essay. I should now proceed to examine the several degrees of our knowledge,

known in the sense they are used; and so are least apt to breed confusion.

My Lord, your Lordship has been pleased to find fault with my use of the *new term, ideas*, without telling me a better name for the immediate objects of the mind in thinking. Your Lordship also has been pleased to find fault with my definition of knowledge, without doing me the favour to give me a better. For it is only about my definition of knowledge that all this stir concerning *certainty* is made. For, with me, to know and to be certain, is the same thing; what I know, that I am certain of; and what I am certain of, that I know. What reaches to knowledge, I think may be called certainty; and what comes short of certainty, I think cannot be called knowledge; as your Lordship could not but observe in the 18th section of chap. 4. of my 4th book, which you have quoted.

My definition of knowledge stands thus: *knowledge seems to me to be nothing but the perception of the connexion and agreement, or disagreement and repugnancy of any of our ideas*. 'This definition your Lordship dislikes, and apprehends it may be of dangerous consequence as to that article of *Christian faith* which your Lordship has endeavoured to defend. For this there is a very easy remedy: it is but for your Lordship to set aside this definition of knowledge by giving us a better, and this danger is over. But your Lordship chuses rather to have a controversy with my book for having it in it, and to put me upon the defence of it; for which I must acknowledge myself obliged to your Lordship for affording me so much of your

time,

ledge, but that it is necessary first to consider the different acceptations of the word *knowledge*.

Knowledge

actual or habitual.

§. 8. There are several ways wherein the mind is possessed of truth; each of which is called *knowledge*.

1. There is *actual knowledge*, which is the present view the mind has of the agreement or disagreement of any of its *ideas*, or of the relation they have one to another.

2. A man is said to know any proposition, which having been once laid before his thoughts, he evidently perceived the agreement or disagreement of the *ideas* whereof it consists; and so lodged it in his memory, that

time, and for allowing me the honour of conversing so much with one so far above me in all respects.

Your Lordship says, *it may be of dangerous consequence to that article of Christian faith which you have endeavoured to defend*. Though the laws of disputing allow bare denial as a sufficient answer to sayings, without any offer of a proof; yet, my Lord, to shew how willing I am to give your Lordship all satisfaction, in what you apprehend may be of *dangerous consequence* in my book, as to that article, I shall not stand still sullenly, and put your Lordship upon the difficulty of shewing wherein that danger lies; but shall on the other side, endeavour to shew your Lordship that that definition of mine, whether true or false, right or wrong, can be of *no dangerous consequence to that article of faith*. The reason which I shall offer for it, is this: because it can be of no consequence to it at all.

That which your Lordship is afraid it may be dangerous to, is an *article of faith*: that which your Lordship labours and is concerned for, is the *certainty of faith*. Now, my Lord, I humbly conceive the *certainty of faith*, if your Lordship thinks fit to call it so, has nothing to do with the *certainty of knowledge*. And to talk of the *certainty of faith*, seems all one to me, as to talk of the knowledge of believing, a way of speaking not easy to me to understand.

Place knowledge in what you will; *start what new methods of certainty* you please, *that are apt to leave men's minds more doubtful than before*; place certainty on such ground as will leave little or no knowledge in the world: (for these are the arguments your Lordship uses against my definition of knowledge) this shakes not at all, nor in the least concerns the assurance of faith; that is quite distinct from it, neither stands nor falls with knowledge.

Faith

that whenever that proposition comes again to be reflected on, he, without doubt or hesitation, embraces the right side, assents to, and is certain of the truth of it. This, I think, one may call *habitual knowledge*: and thus a man may be said to know all those truths, which are lodged in his memory, by a foregoing clear and full perception, whereof the mind is assured past doubt, as often as it has occasion to reflect on them. For, our finite understandings being able to think clearly and distinctly but on one thing

Faith stands by itself, and upon grounds of its own; nor can be removed from them, and placed on those of knowledge. Their grounds are so far from being the same, or having any thing common, that when it is brought to *certainty*, *faith* is destroyed; it is knowledge then, and faith no longer.

With what assurance soever of believing I assent to any *article of faith*, so that I stedfastly venture my all upon it, it is still but *believing*. Bring it to *certainty*, and it ceases to be *faith*. I believe that Jesus Christ was crucified, dead and buried, rose again the third day from the dead, and ascended into heaven: let now *such methods* of knowledge or *certainty* be *started*, as leave men's minds more doubtful than before; let the grounds of knowledge be resolved into what any one pleases, it touches not my *faith*; the foundation of that stands as sure as before, and cannot be at all shaken by it; and one may as well say, that any thing that weakens the sight, or casts a mist before the eyes, endangers the hearing; as that any thing which alters the nature of knowledge (if that could be done) should be of *dangerous consequence to an article of faith*.

Whether then I am or am not mistaken, in the placing *certainty* in the perception of the agreement or disagreement of *ideas*; whether this account of knowledge be true or false, enlarges or straitens the bounds of it more than it should; *faith* still stands upon its own basis, which is not at all altered by it; and every article of that has just the same unmoved foundation, and the very same credibility, that it had before. So that, my Lord, whatever I have said about *certainty*, and how much soever I may be out in it, if I am mistaken, your Lordship has no reason to apprehend any *danger* to any *article of faith* from thence; every one of them stands upon the same bottom it did before, out of the reach of what belongs to knowledge and *certainty*. And thus much of my *way of certainty by ideas*; which, I hope, will satisfy your Lordship how far it is from being *dangerous to any article of the Christian faith* whatsoever.

at once, if men had no knowledge of any more than what they actually thought on, they would all be very ignorant: and he that knew most, would know but one truth, that being all he was able to think on at one time.

Habitual
knowledge
twofold.

§. 9. Of habitual knowledge there are also, vulgarly speaking, two degrees:

First, The one is of *such truths laid up in the memory, as, whenever they occur to the mind, it actually perceives the relation is between those ideas.* And this is in all those truths, whereof we have an *intuitive knowledge*, where the *ideas* themselves, by an immediate view, discover their agreement or disagreement one with another.

Secondly, The other is of *such truths, whereof the mind having been convinced, it retains the memory of the conviction, without the proofs.* Thus a man that remembers certainly, that he once perceived the demonstration that the three angles of a triangle are equal to two right ones, is certain that he knows it, because he cannot doubt of the truth of it. In his adherence to a truth, where the demonstration, by which it was at first known, is forgot, though a man may be thought rather to believe his memory, than really to know, and this way of entertaining a truth seemed formerly to me like something between opinion and knowledge, a sort of assurance which exceeds bare belief, for that relies on the testimony of another: yet, upon a due examination, I find it comes not short of perfect certainty, and is in effect true knowledge. That which is apt to mislead our first thoughts into a mistake in this matter is, that the agreement or disagreement of the *ideas* in this case is not perceived, as it was at first, by an actual view of all the intermediate *ideas*, whereby the agreement or disagreement of those in the proposition was at first perceived; but by other intermediate *ideas*, that shew the agreement or disagreement of the *ideas* contained in the proposition whose certainty we remember. For example, in this proposition,

fition,

sition, that the three angles of a triangle are equal to two right ones, one who has seen and clearly perceived the demonstration of this truth, knows it to be true, when that demonstration is gone out of his mind; so that at present it is not actually in view, and possibly cannot be recollected: but he knows it in a different way from what he did before. The agreement of the two *ideas* joined in that proposition is perceived, but it is by the intervention of other *ideas* than those which at first produced that perception. He remembers, *i. e.* he knows (for remembrance is but the reviving of some past knowledge) that he was once certain of the truth of this proposition, that the three angles of a triangle are equal to two right ones. The immutability of the same relations between the same immutable things, is now the *idea* that shews him, that if the three angles of a triangle were once equal to two right ones, they will always be equal to two right ones. And hence he comes to be certain, that what was once true in the case, is always true; what *ideas* once agreed, will always agree: and consequently what he once knew to be true, he will always know to be true, as long as he can remember that he once knew it. Upon this ground it is, that particular demonstrations in mathematicks afford general knowledge. If then the perception that the same *ideas* will eternally have the same habitudes and relations, be not a sufficient ground of knowledge, there could be no knowledge of general propositions in mathematicks; for no mathematical demonstration would be any other than particular: and when a man had demonstrated any proposition concerning one triangle or circle, his knowledge would not reach beyond that particular diagram. If he would extend it farther, he must renew his demonstration in another instance, before he could know it to be true in another like triangle, and so on: by which means one could never come to the knowledge of any general propositions. Nobody, I think, can deny that Mr. *Newton* certainly knows any proposition, that he now at any time reads in his book, to

be true, though he has not in actual view that admirable chain of intermediate *ideas*, whereby he at first discovered it to be true. Such a memory as that, able to retain such a train of particulars, may be well thought beyond the reach of human faculties; when the very discovery, perception, and laying together that wonderful connexion of *ideas* is found to surpass most readers comprehension. But yet it is evident, the author himself knows the proposition to be true, remembering he once saw the connexion of those *ideas* as certainly as he knows such a man wounded another, remembering that he saw him run him through. But, because the memory is not always so clear as actual perception, and does in all men more or less decay in length of time, this amongst other differences is one, which shews, that *demonstrative knowledge* is much more imperfect than *intuitive*, as we shall see in the following chapter.

CHAP. II.

Of the Degrees of our Knowledge.

Intuitive. §. 1. **A**LL our knowledge consisting, as I have said, in the view the mind has of its own *ideas*, which is the utmost light and greatest certainty, we with our faculties, and in our way of knowledge, are capable of, it may not be amiss to consider a little the degrees of its evidence. The different clearness of our knowledge seems to me to lie in the different way of perception the mind has of the agreement or disagreement of any of its *ideas*. For, if we will reflect on our own ways of thinking, we shall find, that sometimes the mind perceives the agreement or disagreement of two *ideas* immediately by themselves, without the intervention of any other: and this, I think, we may call *intuitive knowledge*. For in this the mind is at no pains of proving or examining, but perceives the truth, as the eye doth light,

light, only by being directed toward it. Thus the mind perceives, that *white* is not *black*, that a *circle* is not a *triangle*, that *three* are more than *two*, and equal to *one* and *two*. Such kind of truths the mind perceives at the first sight of the *ideas* together, by bare *intuition*, without the intervention of any other *idea*; and this kind of knowledge is the clearest and most certain that human frailty is capable of. This part of knowledge is irresistible, and, like bright sunshine, forces itself immediately to be perceived, as soon as ever the mind turns its view that way; and leaves no room for hesitation, doubt, or examination, but the mind is presently filled with the clear light of it. It is on this *intuition* that depends all the certainty and evidence of all our knowledge, which certainty every one finds to be so great, that he cannot imagine, and therefore not require a greater: for a man cannot conceive himself capable of a greater certainty, than to know that any *idea* in his mind is such as he perceives it to be; and that *two ideas*, wherein he perceives a difference, are different, and not precisely the same. He that demands a greater certainty than this, demands he knows not what, and shews only that he has a mind to be a sceptick, without being able to be so. Certainty depends so wholly on this intuition, that in the next degree of *knowledge*, which I call *demonstrative*, this intuition is necessary in all the connexions of the intermediate *ideas*, without which we cannot attain knowledge and certainty.

§. 2. The next degree of knowledge is, where the mind perceives the agreement or disagreement of any *ideas*, but not immediately. Though, wherever the mind perceives the agreement or disagreement, of any of its *ideas*, there be certain knowledge; yet it does not always happen that the mind sees that agreement or disagreement, which there is between them, even where it is discoverable; and in that case remains in ignorance, and at most gets no farther than a probable conjecture. The reason why the mind cannot always perceive presently the agreement or disagreement

Demonstrative.

disagreement of *two ideas* is, because those *ideas*, concerning whose agreement or disagreement the enquiry is made, cannot by the mind be so put together, as to shew it. In this case then, when the mind cannot so bring its *ideas* together, as by their immediate comparison, and as it were juxtaposition, or application one to another, to perceive their agreement or disagreement, it is fain, by the intervention of other *ideas*, (one or more, as it happens) to discover the agreement or disagreement, which it searches; and this is that which we call *reasoning*. Thus the mind, being willing to know the agreement or disagreement in bigness between the three angles of a triangle and two right ones, cannot, by an immediate view and comparing them, do it: because the three angles of a triangle cannot be brought at once, and be compared with any one or two angles; and so of this the mind has no immediate, no intuitive knowledge. In this case the mind is fain to find out some other angles, to which the three angles of a triangle have an equality; and finding those equal to two right ones, comes to know their equality to two right ones.

Depends on
proofs.

§. 3. Those intervening *ideas*, which serve to shew the agreement of any two others, are called *proofs*; and where the agreement or disagreement is by this means plainly and clearly perceived, it is called *demonstration*, it being *shewn* to the understanding, and the mind made to see that it is so. A quickness in the mind to find out these intermediate *ideas*, (that shall discover the agreement or disagreement of any other) and to apply them right, is, I suppose, that which is called *sagacity*.

But not so
easy.

§. 4. *This knowledge by intervening proofs*, though it be certain, yet the evidence of it is *not* altogether *so clear and bright*, nor the assent so ready, *as* in *intuitive knowledge*. For though, in *demonstration* the mind does at last perceive the agreement or disagreement of the *ideas* it considers; yet it is not without pains and attention: there must be more than one transient view to find it. A steady application

application and pursuit is required to this discovery : and there must be a progression by steps and degrees, before the mind can in this way arrive at certainty, and come to perceive the agreement or repugnancy between two *ideas* that need proofs and the use of reason to shew it.

§. 5. *Another difference between intuitive and demonstrative knowledge* is, that though in the latter all doubt be removed, when by the intervention of the intermediate *ideas* the agreement or disagreement is perceived ; yet before the demonstration there was a doubt, which in intuitive knowledge cannot happen to the mind, that has its faculty of perception left to a degree capable of distinct *ideas*, no more than it can be a doubt to the eye, (that can distinctly see white and black) whether this ink and this paper be all of a colour. If there be sight in the eyes, it will at first glimpse, without hesitation, perceive the words printed on this paper, different from the colour of the paper : and so, if the mind have the faculty of distinct perception, it will perceive the agreement or disagreement of those *ideas* that produce intuitive knowledge. If the eyes have lost the faculty of seeing, or the mind of perceiving, we in vain enquire after the quickness of sight in one, or clearness of perception in the other.

Not without precedent doubt.

§. 6. It is true the perception produced by *demonstration* is also very clear ; yet it is often with a great abatement of that evident lustre and full assurance, that always accompany that which I call *intuitive*, like a face reflected by several mirrors one to another, where, as long as it retains the similitude and agreement with the object, it produces a knowledge ; but it is still in every successive reflection with a lessening of that perfect clearness and distinctness which is in the first, till at last, after many removes, it has a great mixture of dimness, and is not at first sight so knowable, especially to weak eyes.

Not so clear.

Thus it is with knowledge made out by a long train of proofs.

Each step must have intuitive evidence.

§. 7. Now, *in every step reason makes in demonstrative knowledge, there is an intuitive knowledge* of that agreement or disagreement it seeks with the next intermediate *idea*, which it uses as a proof. For, if it were not so, that yet would need a proof; since without the perception of such agreement or disagreement there is no knowledge produced: if it be perceived by itself, it is intuitive knowledge: if it cannot be perceived by itself, there is need of some intervening *idea*, as a common measure to shew their agreement or disagreement. By which it is plain, that every step in reasoning, that produces knowledge, has intuitive certainty; which when the mind perceives, there is no more required, but to remember it, to make the agreement or disagreement of the *ideas*, concerning which we enquire, visible and certain. So that, to make any thing a *demonstration*, it is necessary to perceive the immediate agreement of the intervening *ideas*, whereby the agreement or disagreement of the two *ideas* under examination (whereof the one is always the first, and the other the last, in the account) is found. This intuitive perception of the agreement or disagreement of the intermediate *ideas*, in each step and progression of the *demonstration*, must also be carried exactly in the mind, and a man must be sure that no part is left out: which, because in long deductions, and the use of many proofs, the memory does not always so readily and exactly retain; therefore it comes to pass, that this is more imperfect than intuitive knowledge, and men embrace often falshood for demonstrations.

Hence the mistake, *ex præcognitis & præconcessis*.

§. 8. The necessity of this intuitive knowledge, in each step of scientific or demonstrative reasoning, gave occasion, I imagine, to that *mistaken axiom, that all reasoning was ex præcognitis & præconcessis*: which how far it is mistaken, I shall have occasion to shew more

at

at large, when I come to consider propositions, and particularly those propositions which are called maxims, and to shew that it is by a mistake, that they are supposed to be the foundation of all our knowledge and reasonings.

§. 9. It has been generally taken for granted, that mathematicks alone are capable of demonstrative certainty: but to have such an agreement or disagreement, as may intuitively be perceived, being, as I imagine, not the privilege of the *ideas* of *number*, *extension*, and *figure* alone, it may possibly be the want of due method and application in us, and not of sufficient evidence in things, that demonstration has been thought to have so little to do in other parts of knowledge, and been scarce so much as aimed at by any but mathematicians. For, whatever *ideas* we have, wherein the mind can perceive the immediate agreement or disagreement that is between them, there the mind is capable of intuitive knowledge; and where it can perceive the agreement or disagreement of any two *ideas* by an intuitive perception of the agreement or disagreement they have with any intermediate *ideas*, there the mind is capable of demonstration, which is not limited to *ideas* of extension, figure, number, and their modes.

Demonstration not limited to quantity.

§. 10. The reason why it has been generally sought for, and supposed to be only in those, I imagine has been, not only the general usefulness of those sciences; but because, in comparing their equality or excess, the modes of numbers have every the least difference very clear and perceivable: and though in extension every the least excess is not so perceptible; yet the mind has found out ways to examine and discover demonstratively the just equality of two angles, or extensions, or figures; and both these, *i. e.* numbers and figures, can be set down by visible and lasting marks, wherein the *ideas* under consideration are perfectly determined, which for the

Why it has been so thought.

most part they are not, where they are marked only by names and words.

§. 11. But in other simple *ideas*, whose modes and differences are made and counted by degrees, and not quantity, we have so nice and accurate a distinction of their differences, as to perceive or find ways to measure their just equality, or the least differences. For, those other simple *ideas* being appearances or sensations produced in us by the size, figure, number and motion of minute corpuscles singly insensible, their different degrees also depend upon the variation of some or all of those causes; which since it cannot be observed by us in particles of matter, whereof each is too subtile to be perceived, it is impossible for us to have any exact measures of the different degrees of these simple *ideas*. For, supposing the sensation or *idea* we name *whiteness*, be produced in us by a certain number of globules, which, having a verticity about their own centers, strike upon the *retina* of the eye with a certain degree of rotation as well as progressive swiftness; it will hence easily follow, that the more the superficial parts of any body are so ordered as to reflect the greater number of globules of light, and to give them that proper rotation which is fit to produce this sensation of white in us, the more white will that body appear, that from an equal space sends to the *retina* the greater number of such corpuscles, with that peculiar sort of motion. I do not say, that the nature of light consists in very small round globules, nor of whiteness in such a texture of parts as gives a certain rotation to these globules, when it reflects them; for I am not now treating physically of light or colours: but this, I think, I may say, that I cannot (and I would be glad any one would make intelligible that he did) conceive how bodies without us can any ways affect our senses but by the immediate contact of the sensible bodies themselves, as in tasting and feeling, or the impulse of some insensible particles coming from them, as in seeing, hear-

ing,

ing, and smelling; by the different impulse of which parts, caused by their different size, figure, and motion, the variety of sensations is produced in us.

§. 12. Whether then they be globules, or no; or whether they have a verticity about their own centers, that produce the *idea* of *whiteness* in us; this is certain, that the more particles of light are reflected from a body, fitted to give them that peculiar motion which produces the sensation of whiteness in us; and possibly too, the quicker that peculiar motion is, the whiter does the body appear, from which the greater number are reflected, as is evident in the same piece of paper put in the sunbeams, in the shade, and in a dark hole: in each of which it will produce in us the *idea* of whiteness in far different degrees.

§. 13. Not knowing therefore what number of particles, nor what motion of them, is fit to produce any precise degree of *whiteness*, we cannot demonstrate the certain equality of any two degrees of *whiteness*, because we have no certain standard to measure them by, nor means to distinguish every the least real difference, the only help we have being from our senses, which in this point fail us. But where the difference is so great, as to produce in the mind clear distinct *ideas*, whose differences can be perfectly retained, there these *ideas* of colours, as we see in different kinds, as blue, and red, are as capable of demonstration, as *ideas* of number and extension. What I have here said of *whiteness* and colours, I think, holds true in all secondary qualities, and their modes.

Why it has
been so
thought.

§. 14. These two, (*viz.*) intuition and demonstration, are the degrees of our knowledge; whatever comes short of one of these, with what assurance soever embraced, is but faith, or opinion, but not knowledge, at least in all general truths. There is indeed another *perception* of the mind, employed about the *particular existence of finite beings* without us; which
going

Sensitive
knowledge of
particular ex-
istence.

going beyond bare probability, and yet not reaching perfectly to either of the foregoing degrees of certainty, passes under the name of knowledge. There can be nothing more certain, than that the *idea* we receive from an external object is in our minds; this is intuitive knowledge. But whether there be any thing more than barely that *idea* in our minds, whether we can thence certainly infer the existence of any thing without us which corresponds to that *idea*, is that, whereof some men think there may be a question made; because men may have such *ideas* in their minds, when no such thing exists, no such object affects their senses. But yet here, I think, we are provided with an evidence that puts us past doubting: for I ask any one, whether he be not invincibly conscious to himself of a different perception, when he looks on the sun by day, and thinks on it by night; when he actually tastes wormwood, or smells a rose, or only thinks on that savour, or odour? We as plainly find the difference there is between any *idea* revived in our minds by our own memory, and actually coming into our minds by our senses, as we do between any two distinct *ideas*. If any one say a dream may do the same thing, and all these *ideas* may be produced in us without any external objects, he may please to dream that I make him this answer: 1. That it is no great matter, whether I remove his scruple, or no: where all is but dream, reasoning and arguments are of no use; truth and knowledge nothing. 2. That I believe he will allow a very manifest difference between dreaming of being in the fire, and being actually in it. But yet, if he be resolved to appear so sceptical, as to maintain, that what I call being actually in the fire is nothing but a dream; and that we cannot thereby certainly know that any such thing as fire actually exists without us: I answer, That we certainly finding that pleasure or pain follows upon the application of certain objects to us, whose existence we perceive, or dream that we perceive, by our senses; this certainty is as great as our happiness or misery,

misery, beyond which we have no concernment to know, or to be. So that, I think, we may add to the two former sorts of *knowledge* this also of the existence of particular external objects, by that perception and consciousness we have of the actual entrance of *ideas* from them, and allow these *three degrees of knowledge*, viz. *intuitive*, *demonstrative*, and *sensitive*: in each of which there are different degrees and ways of evidence and certainty.

§. 15. But, since our knowledge is founded on, and employed about our *ideas* only, will it not follow from thence, that it is conformable to our *ideas*; and that, where our *ideas* are clear and distinct, or obscure and confused, our knowledge will be so too? To which I answer, No: for our knowledge consisting in the perception of the agreement or disagreement of any two *ideas*, its clearness or obscurity consists in the clearness or obscurity of that perception, and not in the clearness or obscurity of the *ideas* themselves: v. g. a man that has as clear *ideas* of the angles of a triangle, and of equality to two right ones, as any mathematician in the world, may yet have but a very obscure perception of their agreement, and so have but a very obscure knowledge of it. But *ideas*, which, by reason of their obscurity or otherwise, are confused, cannot produce any clear or distinct knowledge; because, as far as any *ideas* are confused, so far the mind cannot perceive clearly, whether they agree or disagree: or, to express the same thing in a way less apt to be misunderstood, he that hath not determined *ideas* to the words he uses, cannot make propositions of them, of whose truth he can be certain.

Knowledge
not always
clear where
the *ideas*
are so.

C H A P. III.

Of the Extent of Human Knowledge.

§. 1. **K**nowledge, as has been said, lying in the perception of the agreement or disagreement of any of our *ideas*, it follows from hence, That,

First, No farther than we have *ideas*.

Secondly, No farther than we can perceive their agreement or disagreement.

Thirdly, intuitive knowledge extends itself not to all the relations of all our *ideas*.

First, We can have *knowledge* no farther than we have *ideas*.

§. 2. *Secondly*, That we can have no *knowledge* farther than we can have perception of that agreement or disagreement: which perception being, 1. Either by *intuition*, or the immediate comparing any two *ideas*; or, 2. By *reason*, examining the agreement or disagreement of two *ideas*, by the intervention of some others; or, 3. By *sensation*, perceiving the existence of particular things: hence it also follows,

§. 3. *Thirdly*, That we cannot have an *intuitive knowledge*, that shall extend itself to all our *ideas*, and all that we would know about them; because we cannot examine and perceive all the relations they have one to another by juxtaposition, or an immediate comparison one with another. Thus, having the *ideas* of an obtuse and an acute angled triangle, both drawn from equal bases, and between parallels, I can, by intuitive knowledge, perceive the one not to be the other; but cannot that way know, whether they be equal or no; because their agreement or disagreement in equality can never be perceived by an immediate comparing them: the difference of figure makes their parts incapable of an exact immediate application; and therefore there is need of some intervening quantities to measure them by, which is demonstration, or rational knowledge.

§. 4. *Fourthly*, It follows also, from what is above observed, that our *rational knowledge* cannot reach to the whole extent of our *ideas*: because, between two different *ideas* we would examine, we cannot always find such *mediums*, as we can connect one to another with an intuitive knowledge, in all the parts of the deduction; and wherever that fails, we come short of knowledge and demonstration.

Fourthly, Nor demonstrative knowledge.

§. 5. *Fifthly*, *Sensitive knowledge*, reaching no farther than the existence of things actually present to our senses, is yet much narrower than either of the former.

Fifthly, Sensitive knowledge narrower than either.

§. 6. From all which it is evident, that *the extent of our knowledge* comes not only short of the reality of things, but even of the extent of our own *ideas*. Though our knowledge be limited to our *ideas*, and cannot exceed them either in extent or perfection; and though these be very narrow bounds, in respect of the extent of all being, and far short of what we may justly imagine to be in some even created understandings, not tied down to the dull and narrow information which is to be received from some few and not very acute ways of perception, such as are our senses; yet it would be well with us, if our knowledge were but as large as our *ideas*, and there were not many doubts and enquiries concerning the *ideas* we have, whereof we are not, nor I believe ever shall be in this world, resolved. Nevertheless, I do not question, but that human knowledge, under the present circumstances of our beings and constitutions, may be carried much farther than it hitherto has been, if men would sincerely, and with freedom of mind, employ all that industry and labour of thought, in improving the means of discovering truth, which they do for the colouring or support of falshood, to maintain a system, interest, or party, they are once engaged in. But yet, after all, I think I may, without injury to human perfection,

Sixthly, Our knowledge therefore narrower than our *ideas*.

fection, be confident, that our knowledge would never reach to all we might desire to know concerning those *ideas* we have; nor be able to surmount all the difficulties, and resolve all the questions, which might arise concerning any of them. We have the *ideas* of a *square*, a *circle*, and *equality*; and yet perhaps, shall never be able to find a circle equal to a square, and certainly know that it is so. We have the *ideas* of *matter* and *thinking*, * but possibly shall never be able to know, whether any mere material being thinks or no; it being

* Against that assertion of Mr. Locke, *That possibly we shall never be able to know whether any mere material being thinks or no*, &c. the Bishop of Worcester argues thus: *if this be true, then, for all that we can know by our ideas of matter and thinking, matter may have a power of thinking: and, if this hold, then it is impossible to prove a spiritual substance in us from the idea of thinking: for how can we be assured by our ideas, that God hath not given such a power of thinking to matter so disposed as our bodies are? especially since it is*

† *Essay of Human Understanding*. B. 4. C. 3. §. 6.

said, † “ That, in respect of our notions, it is not much more remote from our comprehension to conceive that God can, if he pleases, superadd to our *idea* of matter a faculty of thinking, than that he should superadd to it another substance,

“ with a faculty of thinking.” *Whoever asserts this can never prove a spiritual substance in us from a faculty of thinking, because he cannot know, from the idea of matter and thinking, that matter so disposed cannot think: and he cannot be certain, that God hath not framed the matter of our bodies so as to be capable of it.*

‡ *In his first letter to the Bishop of Worcester*, p. 64, 65, &c.

To which Mr. Locke † answers thus: here your Lordship argues, that upon my principles it cannot be proved that there is a *spiritual substance* in us. To which give me leave, with submission, to say, that I think it may be proved from my principles, and I think I have done it; and the proof in my book

stands thus: First, we experiment in ourselves thinking. The idea of this action or mode of *thinking* is inconsistent with the idea of self-subistence, and therefore has a necessary connexion with a support or subject of inhesion: the idea of that support is what we call *substance*; and so from *thinking* experimented in us, we have a proof of a *thinking substance* in us, which in my sense is a *spirit*. Against this your Lordship will argue, that, by what I have said of the possibility that God may, if he pleases, superadd to matter a faculty of thinking, it can never be proved that there is a *spiritual substance* in us, because, upon that supposition, it is possible it may be

be a material substance that thinks in us. I grant it; but add, that the general idea of substance being the same every where, the modification of *thinking*, or the power of *thinking*, joined to it, makes it a *spirit*, without considering what other modifications it has, as, whether it has the modification of *solidity*, or no. As, on the other side, *substance*, that has the modification of *solidity*, is matter, whether it has the modification of thinking, or no. And therefore, if your Lordship means by a *spiritual*, an immaterial substance, I grant I have not proved, nor upon my principles can it be proved, (your Lordship meaning, as I think you do, demonstratively proved) that there is an immaterial substance in us that thinks. Though I presume, from what I have said about this supposition of a system of matter, thinking (which there demonstrates that God is immaterial) will *prove* it in the highest degree probable, that the thinking substance in us is immaterial. But your Lordship thinks not probability enough, and by charging the want of demonstration upon my principles, that the thinking thing in us is immaterial, your Lordship seems to conclude it demonstrable from principles of philosophy. That demonstration I should with joy receive from your Lordship, or any one. For, though all the great ends of morality and religion are well enough secured without it, as I have shewn, yet it would be a great advance of our knowledge in nature and philosophy.

B. 4. C. 10.
§. 16.

B. 4. C. 3.
§. 6.

To what I have said in my book, to shew that all the great ends of religion and morality are secured barely by the immortality of the soul, without a necessary supposition that the soul is immaterial, I crave leave to add, that immortality may and shall be annexed to that, which in its own nature is neither immaterial nor immortal, as the Apostle expressly declares in these words,

* For this corruptible must put on incorruption, and this mortal must put on immortality. *1Cor.xv.53.

Perhaps my using the word *spirit* for a thinking substance, without excluding materiality out of it, will be thought too great a liberty, and such as deserves censure, because I leave immateriality out of the idea I make it a sign of. I readily own, that words should be sparingly ventured on in a sense wholly new; and nothing but absolute necessity can excuse the boldness of using any term in a sense whereof we can produce no example. But, in the present case, I think I have great authorities to justify me. The soul is agreed, on all hands, to be that in us which thinks. And he that will look into the first book of *Cicero's Tusculan* questions, and into the sixth book of *Virgil's Aeneid*, will find, that these two great men, who of all the *Romans* best understood philosophy, thought, or at least did not deny the soul to be a subtle matter, which might come under the name of *aura*, or *Ignis*, or *aether*, and this soul they both of them called *spiritus*: in the notion of which, it is plain, they included only thought and active motion, without the total exclusion

exclusion of matter. Whether they thought right in this, I do not say; that is not the question; but whether they spoke properly, when they called an active, thinking, subtle substance, out of which they excluded only gross and palpable matter, *spiritus, spirit*. I think that nobody will deny, that if any among the Romans can be allowed to speak properly, *Tully* and *Virgil* are the two who may most securely be depended on for it: and one of them speaking of the soul, says, *Dum spiritus hos reget artus*; and the other, *Vita continetur corpore & spiritu*. Where it is plain, by *corpus*, he means (as generally every where) only gross matter that may be felt and handled, as appears by these words, *Si cor, aut sanguis, aut cerebrum est animus; certe, quoniam est corpus, interibit cum reliquo corpore; si anima est, fortè dissipabitur; si ignis, extinguetur*, Tusc. Quæst. l. i. c. 11. Here *Cicero* opposes *corpus* to *ignis* and *anima*, i. e. *aura*, or *breath*. And the foundation of that his distinction of the soul, from that which he calls *corpus* or body, he gives a little lower in these words, *Tanta ejus tenuitas ut fugiat aciem*, ib. c. 22. Nor was it the heathen world alone that had this notion of *spirit*;

the most enlightened of all the antient people of Eccl. iii. 19. God, *Solomon* himself, speaks after the same manner, that which befalleth the sons of men, befalleth beasts, even one thing befalleth them; as the one dieth, so dieth the other, yea, they have all one spirit. So I translate the He-

brew word רוּחַ here, for so I find it translated the very next verse but one; who knoweth the spirit of a man that goeth upward, and the spirit of a beast that goeth down to the earth? In which places it is plain, that *Solomon* applies the word רוּחַ, and our translators of him the word *spirit*, to a substance, out of which immateriality was not wholly excluded, unless the spirit of a beast that goeth downwards to the earth be immaterial.

Nor did the way of speaking in our Saviour's time vary from this: St. *Luke* tells us, that when our Saviour, after his Resurrection, stood in the midst of them, they were affrighted, and supposed that they had seen πνεῦμα, the Greek word which always answers *spirit* in English; and so the translators of the Bible render it here, they supposed that they had seen a spirit. But our Saviour says to them, behold my hands and my feet, that it is I myself; handle me and see; for a spirit hath not flesh and bones, as you see me have. Which words of our Saviour put the same distinction between body and spirit, that *Cicero* did in the place above-cited, viz. That the one was a gross compages that could be felt and handled; and the other such as *Virgil* describes the ghost or soul of *Anchises*.

Lib. VI. Ter conatus ibi collo dare brachia circum,
Ter frustra comprehensa manus effugit imago,
Par levibus ventis volucrique simillima somno.

I would not be thought hereby to say, That *spirit* never does signify a purely immaterial substance. In that sense the scripture, I take it, speaks, when it says *God is a spirit*; and in that sense I have

used

used it; and in that sense I have proved from my principles that there is a *spiritual substance*; and am certain that there is a *spiritual immaterial substance*: which is, I humbly conceive, a direct answer to your Lordship's question in the beginning of this argument, *viz. How we come to be certain that there are spiritual substances, supposing this principle to be true*, that the simple ideas by sensation and reflection are the sole matter and foundation of all our reasoning? But this hinders not, but that if God, that infinite, omnipotent, and perfectly immaterial Spirit, should please to give to a system of very subtle matter, sense and motion, it might with propriety of speech be called *spirit*, though materiality were not excluded out of its complex idea. Your Lordship proceeds, *it is said indeed elsewhere*, that it is repugnant to the idea of senseless matter, that it should put into itself sense, perception, and knowledge. *But this doth not reach the present case; which is not what matter can do of itself, but what matter prepared by an omnipotent hand can do. And what certainty can we have that he hath not done it? We can have none from the ideas, for these are given up in this case, and consequently we can have no certainty, upon these principles, whether we have any spiritual substance within us or not.*

B. 4. C. 10.
§. 5.

Your Lordship in this paragraph proves, that, from what I say, *we can have no certainty whether we have any spiritual substance in us or not.* If by *spiritual substance* your Lordship means an immaterial substance in us, as you speak, p. 246, I grant what your Lordship says is true, that it cannot upon *these principles* be demonstrated. But I must crave leave to say at the same time, that upon *these principles* it can be proved, to the highest degree of probability. If by *spiritual substance* your Lordship means a thinking substance, I must dissent from your Lordship, and say, *that we can have a certainty, upon my principles, that there is a spiritual substance in us.* In short, my Lord, upon my principles, *i. e.* from the idea of thinking, *we can have a certainty* that there is a thinking substance in us; from hence we have a certainty that there is an eternal *thinking substance*. This thinking substance, which has been from eternity, I have proved to be immaterial. This eternal, immaterial, thinking substance, has put into us a thinking substance, which, whether it be a material or immaterial substance, cannot be infallibly demonstrated from our ideas; though from them it may be proved, that it is to the highest degree probable that it is immaterial.

Again, the Bishop of Worcester undertakes to prove from Mr. Locke's principles, that we may be certain, "That the first eternal thinking Being, or omnipotent Spirit cannot, if he would, give to certain systems of created sensible matter, put together as he sees fit, some degrees of sense, perception, and thought."

To which Mr. Locke has made the following answer in his third letter, p. 396, 397, &c.

Your first argument I take to be this; that according to me, the knowledge we have being by our ideas, and our idea of matter in general being a solid substance, and our idea of body a solid extended figured substance; if I admit matter to be capable of thinking, I confound the idea of matter with the idea of a spirit: to which I answer, No, no more than I confound the idea of matter with the idea of an horse, when I say that matter in general is a *solid extended substance*; and that an horse is a material animal, or an extended solid substance with sense and spontaneous motion.

The idea of matter is an extended solid substance; wherever there is such a substance, there is matter, and the essence of matter, whatever other qualities, not contained in that essence, it shall please God to superadd to it. For example, God creates an extended solid substance, without the superadding any thing else to it, and so we may consider it at rest: to some parts of it he superadds motion, but it has still the essence of matter: other parts of it he frames into plants, with all the excellencies of vegetation, life, and beauty, which is to be found in a rose or peach-tree, &c. above the essence of matter, in general, but it is still but matter: to other parts he adds sense and spontaneous motion, and those other properties that are to be found in an elephant. Hitherto it is not doubted but the power of God may go, and that the properties of a rose, a peach or an elephant, superadded to matter, change not the properties of matter; but matter is in these things matter still. But if one venture to go one step farther and say, God may give to matter thought, reason, and volition, as well as sense and spontaneous motion, there are men ready presently to limit the power of the omnipotent Creator, and tell us he cannot do it; because it destroys the essence, or *changes the essential properties* of matter. To make good which assertion, they have no more to say, but that thought and reason are not included in the essence of matter. I grant it; but whatever excellency, not contained in its essence, be superadded to matter, it does not destroy the essence of matter, if it leaves it an extended solid substance; wherever that is, there is the essence of matter: and if every thing of greater perfection, superadded to such a substance, destroys the essence of matter, what will become of the essence of matter in a plant or an animal, whose properties far exceed those of a mere extended solid substance?

But it is farther urged, that we cannot conceive how matter can think. I grant it; but to argue from thence, that God therefore cannot give to matter a faculty of thinking, is to say God's omnipotency is limited to a narrow compass, because man's understanding is so; and brings down God's infinite power to the size of our capacities. If God can give no power to any parts of matter, but what men can account for from the essence of matter in general; if all such qualities and properties must destroy the essence, or *change the essential properties* of matter, which are to our conceptions above it, and we cannot conceive to be the natural consequence

quence of that essence; it is plain, that the essence of matter is destroyed, and its *essential properties changed*, in most of the sensible parts of this our system. For it is visible, that all the planets have revolutions about certain remote centers, which I would have any one explain, or make conceivable by the bare essence, or natural powers depending on the essence of matter in general, without something added to that essence, which we cannot conceive; for the moving of matter in a crooked line, or the attraction of matter by matter, is all that can be said in the case; either of which it is above our reach to derive from the essence of matter or body in general; though one of these two must unavoidably be allowed to be superadded in this instance to the essence of matter in general. The omnipotent Creator advised not with us in the making of the world, and his ways are not the less excellent, because they are past our finding out.

In the next place, the vegetable part of the creation is not doubted to be wholly material; and yet he that will look into it, will observe excellencies and operations in this part of matter, which he will not find contained in the essence of matter in general, nor be able to conceive how they can be produced by it. And will he therefore say, that the essence of matter is destroyed in them, because they have properties and operations not contained in the essential properties of matter as matter, nor explicable by the essence of matter in general?

Let us advance one step farther, and we shall in the animal world meet with yet greater perfections and properties, no ways explicable by the essence of matter in general. If the omnipotent Creator had not superadded to the earth, which produced the irrational animals, qualities far surpassing those of the dull dead earth, out of which they were made, life, sense and spontaneous motion, nobler qualities than were before in it, it had still remained rude senseless matter; and if to the individuals of each species he had not superadded a power of propagation, the species had perished with those individuals: but by these essences or properties of each species, superadded to the matter which they were made of, the essence or properties of matter in general were not destroyed or changed, any more than any thing that was in the individuals before was destroyed or changed by the power of generation, superadded to them by the first benediction of the Almighty.

In all such cases, the superinducement of greater perfections and nobler qualities destroys nothing of the essence or perfections that were there before; unless there can be shewed a manifest repugnancy between them: but all the proof offered for that, is only, that we cannot conceive how matter, without such superadded perfections, can produce such effects; which is, in truth, no more than to say, matter in general, or every part of matter, as matter, has them not; but is no reason to prove, that God, if he pleases, cannot superadd them to some parts of matter, unless it can be proved to be a contradiction, that God should give to some parts of matter qualities

and perfections, which matter in general has not; though we cannot conceive how matter is invested with them, or how it operates by virtue of those new endowments; nor is it to be wondered that we cannot, whilst we limit all its operations to those qualities it had before, and would explain them by the known properties of matter in general, without any such superinduced perfections. For, if this be a right rule of reasoning, to deny a thing to be, because we cannot conceive the manner how it comes to be; I shall desire them who use it to stick to this rule, and see what work it will make both in divinity as well as philosophy: and whether they can advance any thing more in favour of *scepticism*?

For to keep within the present subject of the power of thinking and self motion, bestowed by omnipotent power in some parts of matter: the objection to this is, I cannot conceive how matter should think. What is the consequence? *Ergo*, God cannot give it a power to think. Let this stand for a good reason, and then proceed in other cases by the same. You cannot conceive how matter can attract matter at any distance, much less at the distance of 1,000,000 miles; *ergo*, God cannot give it such a power: you cannot conceive how matter should feel, or move itself, or affect an immaterial being, or be moved by it; *ergo*, God cannot give it such powers: which is in effect to deny gravity, and the revolution of the planets about the sun; to make brutes mere machines, without sense or spontaneous motion; and to allow man neither sense nor voluntary motion.

Let us apply this rule one degree farther. You cannot conceive how an extended solid substance should think, therefore God cannot make it think: can you conceive how your own soul, or any substance, thinks? You find indeed that you do think, and so do I; but I want to be told how the action of thinking is performed: this, I confess, is beyond my conception; and I would be glad any one, who conceives it, would explain it to me. God, I find, has given me this faculty; and since I cannot but be convinced of his power in this instance, which though I every moment experiment in myself, yet I cannot conceive the manner of; what would it be less than an insolent absurdity, to deny his power in other like cases, only for this reason, because I cannot conceive the manner how?

To explain this matter a little farther: God has created a substance; let it be, for example, a solid extended substance. Is God bound to give it, besides being, a power of action? that, I think, nobody will say: he therefore may leave it in a state of inactivity, and it will be nevertheless a substance; for action is not necessary to the being of any substance that God does create. God has likewise created and made to exist, *de novo*, an immaterial substance, which will not lose its being of a substance, though God should bestow on it nothing more but this bare being, without giving it any activity at all. Here are now two distinct substances, the one material, the other immaterial, both in a state of perfect inactivity.

Now I ask, what power God can give to one of these substances (supposing them to retain the same distinct natures that they had as substances in their state of inactivity) which he cannot give to the other? In that state, it is plain, neither of them thinks; for thinking being an action, it cannot be denied, that God can put an end to any action of any created substance, without annihilating of the substance whereof it is an action; and if it be so, he can also create to give existence to such a substance, without giving that substance any action at all. By the same reason it is plain, that neither of them can move itself: now, I would ask, why Omnipotency cannot give to either of these substances, which are equally in a state of perfect inactivity, the same power that it can give to the other? Let it be, for example, that of spontaneous or self-motion, which is a power that it is supposed God can give to an unsolid substance, but denied that he can give to a solid substance.

If it be asked, why they limit the omnipotency of God, in reference to the one rather than the other of these substances? all that can be said to it is, that they cannot conceive, how the solid substance should ever be able to move itself. And as little, say I, are they able to conceive, how a created unsolid substance should move itself. But there may be something in an immaterial substance, that you do not know. I grant it; and in a material one too: for example, gravitation of matter towards matter, and in the several proportions observable, inevitably shews, that there is something in matter that we do not understand, unless we can conceive self-motion in matter; or an inexplicable and inconceivable attraction in matter, at immense, almost incomprehensible distances: it must therefore be confessed, that there is something in solid, as well as unsolid substances, that we do not understand. But this we know, that they may each of them have their distinct beings, without any activity superadded to them, unless you will deny, that God can take from any being its power of acting, which it is probable will be thought too presumptuous for any one to do; and I say, it is as hard to conceive self-motion in a created immaterial, as in a material being, consider it how you will: and therefore this is no reason to deny Omnipotency to be able to give a power of self-motion to a material substance, if he pleases, as well as to an immaterial; since neither of them can have it from themselves, nor can we conceive how it can be in either of them.

The same is visible in the other operation of thinking; both these substances may be made, and exist without thought; neither of them has, or can have the power of thinking from itself: God may give it to either of them, according to the good pleasure of his omnipotency; and in which ever of them it is, it is equally beyond our capacity to conceive, how either of these substances thinks. But for that reason, to deny that God, who had power enough to give them both a being out of nothing, can by the same omnipotency, give them what other powers and perfections he pleases, has no better foundation than to deny his power of creation, be-

cause we cannot conceive how it is performed : and there, at last, this way of reasoning must terminate.

That Omnipotency cannot make a substance to be solid and not solid at the same time, I think with due reverence, we may say ; but that a solid substance may not have qualities, perfections, and powers, which have no natural or visibly necessary connexion with solidity and extension, is too much for us (who are but of yesterday, and know nothing) to be positive in. If God cannot join things together by connexions inconceivable to us, we must deny even the consistency and being of matter itself ; since every particle of it having some bulk, has its parts connected by ways inconceivable to us. So that all the difficulties that are raised against the thinking of matter, from our ignorance, or narrow conceptions, stand not at all in the way of the power of God, if he pleases to ordain it so ; nor prove any thing against his having actually endued some parcels of matter, so disposed as he thinks fit, with a faculty of thinking, till it can be shewn, that it contains a contradiction to suppose it.

Though to me sensation be comprehended under thinking in general, yet, in the foregoing discourse, I have spoke of sense in brutes, as distinct from thinking : because your Lordship, as I remember, speaks of sense in brutes. But here I take liberty to observe, that if your Lordship allows brutes to have sensation, it will follow, either that God can and doth give to some parcels of matter a power of perception and thinking ; or that all animals have immaterial, and consequently, according to your Lordship, immortal souls, as well as men ; and to say that fleas and mites, &c. have immortal souls as well as men, will possibly be looked on as going a great way to serve an hypothesis.

I have been pretty large in making this matter plain, that they who are so forward to bestow hard censures or names on the opinions of those who differ from them, may consider whether sometimes they are not more due to their own ; and that they may be persuaded a little to temper that heat, which, supposing the truth in their current opinions, gives them (as they think) a right to lay what imputations they please on those who would fairly examine the grounds they stand upon. For talking with a supposition and insinuations, that truth and knowledge, nay, and religion too, stands and falls with their systems, is at best but an imperious way of begging the question, and assuming to themselves, under the pretence of zeal for the cause of God, a title to infallibility. It is very becoming that men's zeal for truth should go as far as their proofs, but not go for proofs themselves. He that attacks received opinions with any thing but fair arguments, may, I own, be justly suspected not to mean well, nor to be led by the love of truth ; but the same may be said of him too, who so defends them. An error is not the better for being common, nor truth the worse for having lain neglected : and if it were put to the vote any where in the world, I doubt, as things are managed, whether truth would have the majority,

majority, at least whilst the authority of men, and not the examination of things, must be its measure. The imputation of *scepticism*, and those broad insinuations to render what I have writ suspected, so frequent, as if that were the great business of all this pains you have been at about me, has made me say thus much, my Lord, rather as my sense of the way to establish truth in its full force and beauty, than that I think the world will need to have any thing said to it, to make it distinguish between your Lordship's and my design in writing, which therefore I securely leave to the judgment of the reader, and return to the argument in hand.

What I have above said, I take to be a full answer to all that your Lordship would infer from my idea of matter, of liberty, of indentity, and from the power of abstracting. You ask, * *How can my idea of liberty agree with the idea that bodies can operate only by motion and impulse?* Ans. By the omnipotency of God, who can make all things agree, that involve not a contradiction. It is true, I say, "† That bodies operate by impulse, and † Essay, B. 2. Ch. 8. §. 11. "nothing else." And so I thought when I writ it, and can yet conceive no other way of their operation.

But I am since convinced by the judicious Mr. *Newton's* incomparable book, that it is too bold a presumption to limit God's power in this point by my narrow conceptions. The gravitation of matter towards matter, by ways unconceivable to me, is not only a demonstration that God can, if he pleases, put into bodies powers, and ways of operation, above what can be derived from our idea of body, or can be explained by what we know of matter, but also an unquestionable, and every where visible instance, that he has done so. And therefore in the next edition of my book, I will take care to have that passage rectified.

As to *self-consciousness*, your Lordship asks, † *what is there like self-consciousness in matter?* Nothing at all in matter as matter. But that God cannot bestow on some parcels of matter a power of thinking, and with it self-consciousness, will never be proved by asking, ‖ *how is it possible to apprehend that mere body should perceive that it doth perceive?* The weakness of our apprehension I grant in the case: I confess as much as you please, that we cannot conceive how a solid, no, nor how an unsolid created *substance* thinks; but this weakness of our apprehensions reaches not the power of God, whose weakness is stronger than any thing in men.

Your argument from abstraction we have in this question, * *If it may be in the power of matter to think, how comes it to be so impossible for such organized bodies as the brutes have, to enlarge their ideas by abstraction?* Ans. This seems to suppose, that I place thinking within the natural power of matter. If that be your meaning, my Lord, I never say, nor suppose, that all matter has naturally in it a faculty

a faculty of thinking, but the direct contrary. But if you mean that certain parcels of matter, ordered by the Divine Power, as seems fit to him, may be made capable of receiving from his omnipotency the faculty of thinking; that, indeed, I say; and that being granted, the answer to your question is easy; since, if Omnipotency can give thought to any solid substance, it is not hard to conceive, that God may give that faculty in a higher or lower degree, as it pleases him, who knows what disposition of the subject is suited to such a particular way or degree of thinking.

Another argument to prove, that God cannot endue any parcel of matter with the faculty of thinking, is taken from those words of mine, * where I shew, by what connexion of ideas we may come to know, that God is an immaterial substance. They are these, “ The

* 1 Lett.
P. 139.

“ idea of an eternal actual knowing being, with the idea of immateriality, by the intervention of the idea of matter, and of its

“ actual division, divisibility, and want of perception,” &c. From whence your Lordship thus argues, † *Here the want of perception is owned to be so essential to matter, that God is therefore concluded to be immaterial.* *Answ.* Perception and knowledge in that one eternal being, where it has its source, it is visible must be essentially inseparable from it; therefore the actual want of perception in so great part of the particular parcels of matter, is a demonstration, that the first being, from whom perception and knowledge is inseparable, is not matter: how far this makes the *want of perception an essential property of matter*, I will not dispute; it suffices that it shews, that perception is not an essential property of matter; and therefore matter cannot be that eternal original being to which perception and knowledge is essential. Matter, I say, naturally is without perception: *ergo*, says your Lordship, *want of perception is an essential property of matter, and God does not change the essential properties of things, their nature remaining.* From whence you infer, that God cannot bestow on any parcel of matter (the nature of matter remaining) a faculty of thinking. If the rules of logic, since my days, be not changed, I may safely deny this consequence. For an argument that runs thus, *God does not; ergo, he cannot*, I was taught when I first came to the University, would

† 1 Answ.
P. 77.

‡ B. 4. C. 3. §. 6. not hold. For I never said God *did*; but, † “ That I see no contradiction in it, that he should, if he pleased, give to some systems of senseless matter a faculty of thinking;” and I know nobody, before *Des Cartes*, that ever pretended to shew that there was any contradiction in it. So that at worst, my not being able to see in matter any such incapacity, as makes it impossible for Omnipotency to bestow on it a faculty of thinking, makes me opposite only to the *Cartesians*. For, as far as I have seen or heard, the fathers of the Christian Church never pretended to demonstrate that matter was incapable to receive a power of sensation, perception and thinking, from the

the hand of the omnipotent Creator. Let us therefore, if you please, suppose the form of your argumentation right, and that your Lordship means, *God cannot*: and then, if your argument be good, it proves, that God could not give to *Balaam's* ass a power to speak to his master as he did; for the want of rational discourse being natural to that species, it is but for your Lordship to call it an *essential property*, and then God cannot change the *essential properties of things*, their nature remaining: whereby it is proved, that God cannot, with all his omnipotency, give to an ass a power to speak as *Balaam's* did.

You say, * my Lord, *You do not set bounds to God's omnipotency: for he may, if he please, change a body* *1 Ans. p. 78. *into an immaterial substance*, i. e. take away from a substance the solidity which it had before, and which made it matter, and then give it a faculty of thinking, which it had not before, and which makes it a spirit, the same substance remaining. For if the same substance remains not, *body* is not *changed into an immaterial substance*, but the solid substance, and all belonging to it, is annihilated, and an immaterial substance created, which is not a change of one thing into another, but the destroying of one, and making another *de novo*. In this change therefore of a body or material substance into an immaterial, let us observe these distinct considerations.

First, you say, *God may, if he pleases*, take away from a solid substance solidity, which is that which makes it a material substance or *body*; and may make it *an immaterial substance*, i. e. a substance without solidity. But this privation of one quality gives it not another; the bare taking away a lower or less noble quality does not give it an higher or nobler; that must be the gift of God. For the bare privation of one, and a meaner quality, cannot be the position of an higher and better; unless any one will say, that cogitation, or the power of thinking, results from the nature of substance itself; which if it do, then wherever there is substance, there must be cogitation, or a power of thinking. Here then, upon your Lordship's own principles, is an *immaterial substance* without the faculty of thinking.

In the next place, you will not deny, but God may give to this substance, thus deprived of solidity, a faculty of thinking; for you suppose it made capable of that, by being made immaterial; whereby you allow, that the same numerical substance may be sometimes wholly incogitative, or without a power of thinking, and at other times perfectly cogitative, or endued with a power of thinking.

Further, you will not deny, but God can give it solidity and make it material again. For, I conclude, it will not be denied, that God can make it again what it was before. Now I crave leave to ask your Lordship, why God, having given to this substance the faculty of thinking after solidity was taken from it, cannot restore to it solidity again, without taking away the faculty of thinking?

When

When you have resolved this, my Lord, you will have proved it impossible for God's omnipotence to give a solid substance a faculty of thinking; but till then, not having proved it impossible, and yet denying that God can do it, is to deny that he can do what is

in itself possible; which, as I humbly conceive, is visibly to set bounds to God's omnipotency, though you say here * you do not set bounds to God's omnipotency.

If I should imitate our Lordship's way of writing, I should not omit to bring in *Epicurus* here, and take notice that this was his way, *Deum verbis ponere, re tollere*: and then add, that *I am certain you do not think he promoted the great ends of religion and morality.*

For it is with such candid and kind insinuations as these, that you bring in both † *Hobbes* and ‡ *Spinoza* into your discourse here about God's being able, if he please, to give to some parcels of matter, ordered as he thinks fit, a faculty of thinking: neither of those authors having, as appears by any passages you bring out of them, said any thing to this question, nor having, as it seems, any other business here, but by their names skilfully to give that character to my book, with which you would recommend it to the world.

I pretend not to enquire what measure of zeal, nor for what, guides your Lordship's pen in such a way of writing, as your's has all along been with me: only I cannot but consider, what reputation it would give to the writings of the fathers of the church, if they should think truth required, or religion allowed them to imitate such patterns. But God be thanked, there be those amongst them who do not admire such ways of managing the cause of truth or religion; they being sensible that if every one, who believes or can pretend he hath truth on his side, is thereby authorized, without proof, to insinuate whatever may serve to prejudice men's minds against the other side, there will be great ravage made on charity and practice, without any gain to truth or knowledge: and that the liberties frequently taken by disputants to do so, may have been the cause that the world in all ages has received so much harm, and so little advantage from controversies in religion.

These are the arguments which your Lordship has brought to confute one saying in my book, by other passages in it; which therefore being all but *argumenta ad hominem*, if they did prove what they do not, are of no other use, than to gain a victory over me: a thing methinks, so much beneath your Lordship, that it does not deserve one of your pages. The question is, whether God can, if he pleases, bestow on any parcel of matter, ordered as he

thinks fit, a faculty of perception and thinking.

¶ 1 Anf. p. 79. You say, || *You look upon a mistake herein to be of dangerous consequence, as to the great ends of religion and morality.* If this be so, my Lord, I think one may well wonder, why your Lordship has brought no arguments to establish the truth itself which you look on, to be of such dangerous consequence to be mistaken in; but have spent so many pages only in a personal matter, in

endeavouring

endeavouring to shew, that I had inconsistencies in my book; which if any such thing had been shewed, the question would be still as far from being decided, and the danger of mistaking about it as little prevented, as if nothing of all this had been said. If therefore your Lordship's care of the *great ends of religion and morality* have made you think it necessary to clear this question, the world has reason to conclude there is little to be said against that proposition which is to be found in my book, concerning the possibility, that some parcels of matter might be so ordered by Omnipotence, as to be endued with a faculty of thinking, if God so pleased; since your Lordship's concern for the *promoting the great ends of religion and morality*, has not enabled you to produce one argument against a proposition *that you think of so dangerous consequence to them*.

And here I crave leave to observe, that though in your title page you promise to prove, that my *notion of ideas is inconsistent with itself*, (which if it were, it could hardly be proved to be inconsistent with any thing else) *and with the articles of the christian faith*; yet your attempts all along have been to prove me, in some passages of my book, inconsistent with myself, without having shewn any proposition in my book inconsistent with any *article of the christian faith*.

I think your Lordship has indeed made use of one argument of your own: but it is such an one, that I confess I do not see how it is apt much to promote religion, especially the Christian religion, founded on revelation. I shall set down your Lordship's words, that they may be considered: you say, * *That you are of opinion, that the great ends of religion and morality are best secured by the proofs of the immortality of the soul from its nature and properties; and which you think proves it immaterial. Your Lordship does not question whether God can give immortality to a material substance; but you say it takes off very much from the evidence of immortality, if it depend wholly upon God's giving that, which of its own nature it is not capable of, &c.* So likewise you say, † *If a man cannot be certain, but that matter may think, (as I affirm) then what becomes of the soul's immateriality (and consequently immortality) from its operations? But for all this, say I, his assurance of faith remains on its own basis. Now you appeal to any man of sense, whether the finding the uncertainty of his own principles, which he went upon, in point of reason, doth not weaken the credibility of these fundamental articles, when they are considered purely as matters of faith? For before, there was a natural credibility in them on the account of reason; but by going on wrong grounds of certainty, all that is lost, and instead of being certain, he is more doubtful than ever. And if the evidence of faith fall so much short of that of reason, it must needs have less effect upon men's minds, when the subserviency of reason is taken away; as it must be when the grounds of certainty by reason are vanished. Is it at all probable, that he who finds his reason deceive him in such fundamental points, should have his faith stand firm*

* 1 Answer,
P. 54, 55.

† 2 Answer,
p. 28.

firm and unmoveable on the account of revelation? For in matters of revelation there must be some antecedent principles supposed, before we can believe any thing on the account of it.

More to the same purpose we have some pages farther, where, from some of my words, your Lordship says,
 * Ibid. p. 35. * *You cannot but observe, that we have no certainty upon my grounds, that self consciousness depends upon an individual immaterial substance, and consequently that a material substance may, according to my principles, have self consciousness in it; at least, that I am not certain of the contrary. Whereupon your Lordship bids me consider, whether this doth not a little affect the whole article of the resurrection?* What does all this tend to, but to make the world believe that I have lessened the credibility of the immortality of the soul, and the resurrection, by saying, that though it be most highly probable, that the soul is immaterial, yet upon my principles it cannot be demonstrated; because it is not impossible to God's omnipotency, if he pleases, to bestow upon some parcels of matter, disposed as he sees fit, a faculty of thinking?

This your accusation of my lessening the credibility of these articles of faith, is founded on this, that the article of the immortality of the soul abates of its credibility, if it be allowed, that its immateriality (which is the supposed proof from reason and philosophy of its immortality) cannot be demonstrated from natural reason: which argument of your Lordship's, bottoms, as I humbly conceive, on this, that divine revelation abates of its credibility in all those articles it proposes, proportionably as human reason fails to support the testimony of God. And all that your Lordship in those passages has said, when examined, will, I suppose, be found to import thus much, *viz.* Does God propose any thing to mankind to be believed? It is very fit and credible to be believed, if reason can demonstrate it to be true. But if human reason come short in the case, and cannot make it out, its credibility is thereby lessened; which is in effect to say, that the veracity of God is not a firm and sure foundation of faith to rely upon, without the concurrent testimony of reason; *i. e.* with reverence be it spoken, God is not to be believed on his own word, unless what he reveals be in itself credible, and might be believed without him.

If this be a way to promote religion, the Christian religion, in all its articles, I am not sorry that it is not a way to be found in any of my writings; for I imagine any thing like this would (and I should think deserved to) have other titles than bare *scepticism* bestowed upon it, and would have raised no small outcry against any one, who is not to be supposed to be in the right in all that he says, and so may securely say what he pleases. Such as I, the *profanum vulgus*, who take too much upon us, if we would examine, have nothing to do but to hearken and believe, though what he said should subvert the very foundations of the Christian faith.

What I have above observed, is so visibly contained in your Lordship's argument, that when I met with it in your answer to my

my first letter, it seemed so strange for a man of your Lordship's character, and in a dispute in defence of the doctrine of the Trinity, that I could hardly persuade myself, but it was a slip of your pen: but when I found it in your second letter * made use of again, and seriously enlarged as an argument of weight to be insisted upon, I was convinced, that it was a principle that you heartily embraced, how little favourable soever it was to the articles of the Christian religion, and particularly those which you undertook to defend.

I desire my reader to peruse the passages as they stand in your letters themselves, and see whether what you say in them does not amount to this: that a revelation from God is more or less credible, according as it has a stronger or weaker confirmation from human reason. For,

1. Your Lordship says, † *You do not question whether God can give immortality to a material substance; but you say it takes off very much from the evidence of immortality, if it depends wholly upon God's giving that, which of its own nature it is not capable of.* * 2 Anf. p. 28, 29. † 1 Anf. p. 55.

To which I reply, any one's not being able to demonstrate the soul to be immaterial, *takes off not very much*, nor at all, from the evidence of its immortality, if God has revealed that it shall be immortal; because the veracity of God is a demonstration of the truth of what he has revealed, and the want of another demonstration of a proposition, that is demonstratively true, takes not off from the evidence of it. For where there is a clear demonstration, there is as much evidence as any truth can have, that is not self-evident. God has revealed that the souls of men shall live for ever. But, says your Lordship, from this evidence it takes off *very much*, if it depends wholly upon God's giving that, which of its own nature it is not capable of, i. e. The revelation and testimony of God loses much of its evidence, if this depends wholly upon the good pleasure of God, and cannot be demonstratively made out by natural reason, that the soul is immaterial, and consequently in its own nature immortal. For that is all that here is or can be meant by these words, *which of its own nature it is not capable of*, to make them to the purpose. For the whole of your Lordship's discourse here, is to prove, that the soul cannot be material, because then the evidence of its being immortal would be *very much lessened*. Which is to say, that it is not as credible upon divine revelation, that a material substance should be immortal, as an immaterial; or which is all one, that God is not equally to be believed, when he declares, that a material substance shall be immortal, as when he declares, that an immaterial shall be so; because the immortality of a material substance cannot be demonstrated from natural reason.

Let us try this rule of your Lordship's a little farther. God hath revealed, that the bodies men shall have after the resurrection, as well as their souls, shall live to eternity. Does your Lordship believe

believe the eternal life of the one of these more than of the other, because you think you can prove it of one of them by natural reason, and of the other not? Or can any one, who admits of divine revelation in the case, doubt of one of them more than the other? Or think this proposition less credible, that the bodies of men, after the resurrection, shall live for ever; than this, That the souls of men shall, after the resurrection, live for ever? For that he must do, if he thinks either of them is less credible than the other. If this be so, reason is to be consulted how far God is to be believed, and the credit of divine testimony must receive its force from the evidence of reason; which is evidently to take away the credibility of divine revelation in all supernatural truths, wherein the evidence of reason fails. And how much such a principle as this tends to the support of the doctrine of the Trinity, or the promoting the Christian religion, I shall leave it to your Lordship to consider.

I am not so well read in *Hobbes* or *Spinoza*, as to be able to say, what were their opinions in this matter. But possibly there be those, who will think your Lordship's authority of more use to them in the case, than those justly decried names; and be glad to find your Lordship a patron of the *oracles of reason*, so little to the advantage of the *oracles* of divine revelation. This at least, I think, may be subjoined to the words at the bottom of the next

* 1 Anf. p. 65. page*, That *those who have gone about* to lessen the credibility of the articles of faith, which evidently they do, who say they are less credible, because they cannot be made out demonstratively by natural reason, have not been thought to secure several of the articles of the Christian faith, especially those of the *Trinity, Incarnation, and Resurrection* of the Body, which are those upon the account of which I am brought by your Lordship into this dispute.

I shall not trouble the reader with your Lordship's endeavours, in the following words, to prove, that if the soul be not an immaterial substance, it can be *nothing but life*; your very first words visibly confuting all that you alledge to that purpose, they are, † *If the soul be a material substance, it is really nothing but life*; which is to say, That if the soul be really a *substance*, it is not really a *substance*, but *really nothing* else but an affection of a substance; for the life, whether of a material or immaterial substance, is not the substance itself, but an affection of it.

2. You say, † *Although we think the separate state of the soul after death, is sufficiently revealed in the scripture; yet it creates a great difficulty in understanding it, if the soul be nothing but life, or a material substance, which must be dissolved when life is ended. For, if the soul be a material substance, it must be made up, as others are, of the cohesion of solid and separate parts, how minute and invisible soever they be. And what is it which should keep them together, when life is gone?*

† 1 Anf. p. 57.

gone? So that it is no easy matter to give an account how the soul should be capable of immortality, unless it be an immaterial substance; and then we know the solution and texture of bodies cannot reach the soul, being of a different nature.

Let it be as hard a matter as it will, to give an account what it is that should keep the parts of a material soul together, after it is separated from the body; yet it will be always as easy to give an account of it, as to give an account what it is which shall keep together a material and immaterial substance. And yet the difficulty that there is to give an account of that, I hope, does not, with your Lordship, weaken the credibility of the inseparable union of soul and body to eternity: and I persuade myself, that the men of sense, to whom your Lordship appeals in the case, do not find their belief of this fundamental point much weakened by that difficulty. I thought heretofore (and by your Lordship's permission would think so still) that the union of the parts of matter, one with another, is as much in the hands of God, as the union of a material and immaterial substance; and that it does not take off very much, or at all, from the evidence of immortality, which depends on that union, that it is no easy matter to give an account what it is that should keep them together: Though its depending wholly upon the gift and good pleasure of God, where the manner creates great difficulty in the understanding, and our reason cannot discover in the nature of things how it is, be that which, your Lordship so positively says, lessens the credibility of the fundamental articles of the resurrection and immortality.

But, my Lord, to remove this objection a little, and to shew of how small force it is even with yourself; give me leave to presume, that your Lordship as firmly believes the immortality of the body after the resurrection, as any other article of faith: if so, then it being no easy matter to give an account what it is that shall keep together the parts of a material soul, to one that believes it is material, can no more weaken the credibility of its immortality, than the like difficulty weakens the credibility of the immortality of the body. For, when your Lordship shall find it an easy matter to give an account what it is, besides the good pleasure of God, which shall keep together the parts of our material bodies to eternity, or even soul and body, I doubt not but any one who shall think the soul material, will also find it as easy to give an account what it is that shall keep those parts of matter also together to eternity.

Were it not that the warmth of controversy is apt to make men so far forget, as to take up those principles themselves (when they will serve their turn) which they have highly condemned in others, I should wonder to find your Lordship to argue, that because it is a difficulty to understand what should keep together the minute parts of a material soul, when life is gone; and because it is not an easy matter to give an account how the soul should be capable of immortality, unless it be an immaterial substance: Therefore it is not so credible, as if it were easy to give an account by natural reason, how it
could

could be. For to this it is that all this your discourse tends, as is evident by what is already set down out of page 55; and will be more fully made out by what your Lordship says in other places, though there needs no such proof, since it would all be nothing against me in any other sense.

I thought your Lordship had in other places asserted, and insisted on this truth, that no part of divine revelation was the less to be believed, because the thing itself *created great difficulty in the understanding*, and the manner of it was hard to be explained, *and it was no easy matter to give an account how it was.* This, as I take it, your Lordship condemned in others as a very unreasonable principle, and such as would subvert all the articles of the Christian religion, that were mere matters of faith, as I think it will: and is it possible, that you should make use of it here yourself, against the article of *life and immortality*, that Christ hath brought to light through the gospel, and neither was, nor could be made out by natural reason without revelation? But you will say, you speak only of the soul; and your words are, *That it is no easy matter to give an account how the soul should be capable of immortality, unless it be an immaterial substance.* I grant it; but crave leave to say, that there is not any one of those difficulties, that are or can be raised about the manner *how* a material soul can be immortal, which do not as well reach the immortality of the body.

But, if it were not so, I am sure this principle of your Lordship's would reach other articles of faith, wherein our natural reason finds it not so easy to give an account *how* those mysteries are; and which therefore, according to your principles, must be less credible than other articles, that *create less difficulty to the understanding.* For your Lordship says, * *That you appeal to any man of sense, whether to a man, who thought by his principles he could from natural grounds demonstrate the immortality of the soul, the finding the uncertainty of these principles he went upon in point of reason, i. e. the finding he could not certainly prove it by natural reason, doth not weaken the credibility of that fundamental article, when it is considered purely as a matter of faith?* which, in effect, I humbly conceive, amounts to this, that a proposition divinely revealed, that cannot be proved by natural reason, is less credible than one that can: which seems to me to come very little short of this, with due reverence be it spoken, that God is less to be believed when he affirms a proposition that cannot be proved by natural reason, than when he proposes what can be proved by it. The direct contrary to which is my

† 2 Anf. p. 29. opinion, though you endeavour to make it good by these following words; † *If the evidence of faith fall so much short of that of reason, it must needs have less effect upon men's minds, when the subserviency of reason is taken away; as it must be when the grounds of certainty by reason are vanished. Is it at all probable, that he who finds his reason deceive him in such fundamental points*

points, should have his faith stand firm and unmoveable on the account of revelation? Than which I think there are hardly plainer words to be found out to declare, that the credibility of God's testimony depends on the natural evidence of probability of the things we receive from revelation, and rises and falls with it; and that the truths of God, or the articles of mere faith, lose so much of their *credibility*, as they want proof from reason: which if true, revelation may come to have no *credibility* at all. For if, in this present case, the credibility of this proposition, the souls of men shall live for ever, revealed in the scripture, be lessened by confessing it cannot be demonstratively proved from reason; though it be asserted to be most highly probable: must not, by the same rule, its credibility dwindle away to nothing, if natural reason should not be able to make it out to be so much as probable, or should place the probability from natural principles on the other side? For, if mere want of demonstration *lessens the credibility* of any proposition divinely revealed, must not want of probability, or contrary probability from natural reason, quite take away its *credibility*? Here at last it must end, if in any one case the veracity of God, and the *credibility* of the truths we receive from him by revelation, be subjected to the verdicts of human reason, and be allowed to receive any accession or diminution from other proofs, or want of other proofs of its certainty or probability.

If this be your Lordship's way to promote religion, or defend its articles, I know not what argument the greatest enemies of it could use more effectual for the subversion of those you have undertaken to defend; this being to resolve all revelation perfectly and purely into natural reason, to bound its *credibility* by that, and leave no room for faith in other things, than what can be accounted for by natural reason without revelation.

Your Lordship * insists much upon it, as if I had contradicted what I have said in my *essay*, by saying

† That upon my principles it cannot be demonstratively proved, that it is an immaterial substance in us that thinks, however probable it be. He that will

be at the pains to read that chapter of mine, and consider it, will find, that my business there was to shew, that it was no harder to conceive an immaterial than a material substance; and that from the ideas of thought, and a power of moving of matter, which we experienced in ourselves, (ideas originally not belonging to matter as matter) there was no more difficulty to conclude there was an immaterial substance in us, than that we had material parts. These ideas of thinking, and power of moving of matter, I in another place shewed, did demonstratively lead us to the certain knowledge of the existence of an immaterial thinking being, in whom we have the idea of spirit in the strictest sense; in which sense I also applied it to the soul, in the 23d ch. of my *Essay*; the easily conceivable possibility, nay great probability, that the thinking substance in us is immaterial, giving me sufficient ground for it: in which

* 1 Anf. p.

48—54.

† B. 2. C.

23.

sense I shall think I may safely attribute it to the thinking substance in us, till your Lordship shall have better proved from my words, that it is impossible it should be immaterial. For I only say, that it is possible, *i. e.* involves no contradiction, that God, the omnipotent immaterial spirit, should, if he pleases, give to some parcels of matter, disposed as he thinks fit, a power of thinking and moving: which parcels of matter, so endued with a power of thinking and motion, might properly be called spirits, in contradistinction to unthinking matter. In all which, I presume, there is no manner of contradiction.

I justified my use of the word *spirit*, in that sense, from the authorities of *Cicero* and *Virgil*, applying the Latin word *spiritus*, from whence *spirit* is derived, to the soul as a thinking thing, without excluding materiality out of it. * 1 Anf. p. 51—60. To which your Lordship replies, * *That Cicero, in his Tusculan Questions, supposes the soul not to be a finer sort of body, but of a different nature from the body—That he calls the body the prison of the soul.*—And says, *that a wise man's business is to draw off his soul from his body.* And then your Lordship concludes, as is usual, with a question, *Is it possible now to think so great a man looked on the soul but as a modification of the body, which must be at an end with life?* Anf. No; it is impossible that a man of so good sense as *Tully*, when he uses the word *corpus* or *body* for the gross and visible parts of a man, which he acknowledges to be mortal, should look on the soul to be a modification of that body; in a discourse wherein he was endeavouring to persuade another, that it was immortal. It is to be acknowledged that truly great men, such as he was, are not wont so manifestly to contradict themselves. He had therefore no thought concerning the modification of the body of a man in the case: he was not such a trifler as to examine, whether the modification of the body of a man was immortal, when that body itself was mortal: and therefore, that which he reports as *Dicæarchus's* opinion, he dismisses in the beginning without any more ado, *c. 11.* But *Cicero's* was a direct, plain, and sensible enquiry, *viz.* What the soul was? to see whether from thence he could discover its immortality. But in all that discourse in his first book of *Tusculan Questions*, where he lays out so much of his reading and reason, there is not one syllable shewing the least thought that the soul was an immaterial substance; but many things directly to the contrary.

Indeed (1) he shuts out the *body*, taken in the
 † Ch. 19, 22, senses he uses † *corpus* all along, for the sensible
 30, 31, &c. organical parts of a man; and is positive that is not
 the soul: and *body* in this sense, taken for the human
 body, he calls the *prison of the soul*: and says a wise man, instancing in *Socrates* and *Cato*, is glad of a fair opportunity to get out of it. But he no where says any such thing of matter: he calls not matter in general the prison of the soul, nor talks a word of being separate from it.

2. He

2. He concludes, that the soul is not, like other things here below, made up of a composition of the elements, *ch. 27.*

3. He excludes the two gross elements, earth and water, from being the soul, *ch. 26.*

So far he is clear and positive: but beyond this he is uncertain; beyond this he could not get: for in some places he speaks doubtfully, whether the soul be not air or fire. *Anima sit animus ignisve, nescio, c. 25.* And therefore he agrees with *Panætius*, that, if it be at all elementary, it is, as he calls it, *inflammata anima*, inflamed air; and for this he gives several reasons, *c. 18, 19.* And though he thinks it to be of a peculiar nature of its own, yet he is so far from thinking it immaterial, that he says, *c. 19.* that the admitting it to be of an aerial or igneous nature, will not be inconsistent with any thing he had said.

That which he seems most to incline to is, that the soul was not at all elementary, but was of the same substance with the heavens; which *Aristotle*, to distinguish from the four elements, and the changeable bodies here below, which he supposed made up of them, called *quinta essentia*. That this was *Tully's* opinion is plain from these words, *Ergo animus (qui, ut ego dico, divinus) est, ut Euripides audet dicere, Deus; & quidem, si Deus aut anima aut ignis est. idem est animus hominis. Nam ut illa natura cœlestis et terrâ vacat & humore; sic utriusque harum rerum humanus animus est expers. Sin autem est quinta quædam natura ab Aristotele inducta; primum hæc & deorum est & animorum. Hanc nos sententiam secuti, his ipsis verbis in consolatione hæc expressimus, ch. 26.* And then he goes on, *c. 27.* to repeat those his own words, which your Lordship has quoted out of him, wherein he had affirmed, in his treatise *De Consolatione*, the soul not to have its original from the earth, or to be mixed or made of any thing earthly; but had said, *singularis est igitur quædam natura & vis animi, sejuncta ab his usitatis notisque naturis*: whereby he tells us, he meant nothing but *Aristotle's Quinta Essentia*: which being unmixed, being that of which the Gods and Souls consisted, he calls it *divinum cœleste*, and concludes it eternal; it being, as he speaks, *sejuncta ab omni mortali concretionem*. From which it is clear, that in all his enquiry about the substance of the soul, his thoughts went not beyond the four elements, or *Aristotle's Quinta Essentia*, to look for it. In all which there is nothing of immateriality, but quite the contrary.

He was willing to believe (as good and wise men have always been) that the soul was immortal; but for that, it is plain, he never thought of its immateriality, but as the Eastern people do, who believe the soul to be immortal, but have nevertheless no thought, no conception of its immateriality. It is remarkable what a very considerable and judicious author says * in the case. *No opinion, says he, has been so universally received as that of the immortality of the soul; but its immateriality is a truth, the knowledge whereof has not spread so far. And indeed it is extremely difficult to let into the mind of a Siamite the idea of a pure spirit.* This

* Loubere du
Royaume de
Siam, T. 1.
c. 19. §. 4.

the missionaries, who have been longest among them, are positive in. All the pagans of the East do truly believe, that there remains something of a man after his death, which subsists independently and separately from his body. But they give extension and figure to that which remains, and attribute to it all the same members, all the same substances, both solid and liquid, which our bodies are composed of. They only suppose that the souls are of a matter subtile enough to escape being seen or handled.—Such were the shades and manes of the Greeks and the Romans. And it is by these figures of the souls, answerable to those of the bodies, that Virgil supposed Æneas knew Palinurus, Dido, and Anchises, in the other world.

This gentleman was not a man that travelled into those parts for his pleasure, and to have the opportunity to tell strange stories, collected by chance, when he returned: but one chosen on purpose (and he seems well chosen for the purpose) to enquire into the singularities of *Siam*. And he has so well acquitted himself of the commission, which his epistle dedicatory tells us he had, to inform himself exactly of what was most remarkable there, that had we but such an account of other countries of the East, as he has given us of this kingdom, which he was an envoy to, we should be much better acquainted than we are, with the manners, notions, and religions of that part of the world inhabited by civilized nations, who want neither good sense nor acuteness of reason, though not cast into the mould of the logick and philosophy of our schools.

But to return to *Cicero*: it is plain, that in his enquiries about the soul, his thoughts went not at all beyond matter. This the expressions that drop from him in several places of this book evidently shew. For example, that the souls of excellent men and women ascended into heaven; of others, that they remained here on earth, c. 12. That the soul is hot, and warms the body: that, at its leaving the body, it penetrates, and divides, and breaks through our thick, cloudy, moist air: that it stops in the region of fire, and ascends no farther, the equality of warmth and weight making that its proper place, where it is nourished and sustained, with the same things wherewith the stars are nourished and sustained, and that by the convenience of its neighbourhood it shall there have a clearer view and fuller knowledge of the heavenly bodies, c. 19. That the soul also from this height shall have a pleasant and fairer prospect of the globe of the earth, the disposition of whose parts will then lie before it in one view, c. 20. That it is hard to determine what conformation, size, and place, the soul has in the body: that it is too subtile to be seen: that it is in the human body as in a house, or a vessel, or a receptacle, c. 22. All which are expressions that sufficiently evidence, that he who used them had not in his mind separated materiality from the idea of the soul.

It may perhaps be replied, that a great part of this which we find in *chap. 19* is said upon the principles of those who would have the soul to be *anima inflammata*, inflamed air. I grant it. But it is also to be observed, that in this 19th, and the two following chapters,

chapters, he does not only not deny, but even admits, that so material a thing as inflamed air may think.

The truth of the case in short is this: *Cicero* was willing to believe the soul immortal; but, when he sought in the nature of the soul itself something to establish this his belief into a certainty of it, he found himself at a loss. He confessed he knew not what the soul was; but the not knowing what it was, he argues, c. 22. was no reason to conclude it was not. And thereupon he proceeds to the repetition of what he had said in his 6th book, *De Repub.* concerning the soul. The argument, which, borrowed from *Plato*, he there makes use of, if it have any force in it, not only proves the soul to be immortal, but more than, I think, your Lordship will allow to be true: for it proves it to be eternal, and without beginning, as well as without end: *Neque nata certe est, & æterna est*, says he.

Indeed from the faculties of the soul he concludes right, that it is of *divine original*: but as to the substance of the soul, he at the end of this discourse concerning its faculties, c. 25. as well as at the beginning of it, c. 22. is not ashamed to own his ignorance of what it is; *Anima sit animus, ignisve, nescio; nec me pudet, ut istos, fateri nescire quod nesciam. Illud si ulla alia de-re obscura affirmare possem, si-ve anima, si-ve ignis sit animus, eum jurarem esse divinum*, c. 25. So that all the certainty he could attain to about the soul, was, that he was confident there was something divine in it, i. e. there were faculties in the soul that could not result from the nature of matter, but must have their original from a divine power; but yet those qualities, as divine as they were, he acknowledged might be placed in breath or fire, which, I think, your Lordship will not deny to be material substances. So that all those divine qualities, which he so much and so justly extols in the soul, led him not, as appears, so much as to any the least thought of immateriality. This is demonstration, that he built them not upon an exclusion of materiality out of the soul; for he avowedly professes he does not know, but breath or fire might be this thinking thing in us: and in all his considerations about the substance of the soul itself, he stuck in *air*, or *fire*, or *Aristotle's Quinta Essentia*; for beyond those it is evident he went not.

But with all his proofs out of *Plato*, to whose authority he defers so much, with all the arguments his vast reading and great parts could furnish him with for the immortality of the soul, he was so little satisfied, so far from being certain, so far from any thought that he had, or could prove it, that he over and over again professes his ignorance and doubt of it. In the beginning he enumerates the several opinions of the philosophers, which he had well studied, about it: and then, full of uncertainty, says, *Harum sententiarum quæ vera sit, Deus aliquis viderit; quæ verisimillima, magna quæstio*, c. 11. And towards the latter end, having gone them all over again, and one after another examined them, he professes himself still at a loss, not knowing on which to pitch, nor what to de-

termine.

termine. *Mentis acies*, says he, *seipsam intuens, nonnunquam hebescit, ob eamque causam contemplandi diligentiam amittimus. Itaque dubitans, circumspiciens, hæsitans, multa adversa revertens, tanquam in rate in mari immenso, nostra vebitur oratio*, c. 30. And to conclude this argument, when the person he introduces as discoursing with him, tells him he is resolved to keep firm to the belief of immortality; *Tully* answers, c. 32. *Laudo id quidem, nisi nihil animis oportet considerare: movemur enim sæpe aliquo acute concluso; labamus, mutamusque sententiam clarioribus etiam in rebus; in his est enim aliqua obscuritas.*

So unmoveable is that truth delivered by the Spirit of Truth, that though the light of nature gave some obscure glimmering, some uncertain hopes of a future state; yet human reason could attain to no clearness, no certainty about it, but that it was JESUS CHRIST alone, who had brought life and immortality to light through the gospel*. Though we are now told, that to own the inability of natural reason to bring immortality to light, or, which passes for the same, to own principles upon which the immateriality of the soul (and, as it is urged, consequently its immortality) cannot be demonstratively proved, does lessen the belief of this article of revelation, which JESUS CHRIST alone has brought to light, and which consequently the scripture assures us is established and made certain only by revelation. This would not perhaps have seemed strange, from those who are justly complained of for slighting the revelation of the gospel, and therefore would not be much regarded, if they should contradict so plain a text of scripture, in favour of their all-sufficient reason: but what use the promoters of scepticism and infidelity, in an age so much suspected by your Lordship, may make of what comes from one of your great authority and learning, may deserve your consideration.

And thus, my Lord, I hope, I have satisfied you concerning *Cicero's* opinion about the soul, in his first book of *Tusculan Questions*; which, though I easily believe, as your Lordship says, you are no stranger to, yet I humbly conceive you have not shewn (and, upon a careful perusal of that Treatise again, I think I may boldly say you cannot shew) one word in it, that expresses any thing like a notion in *Tully* of the soul's immateriality, or its being an immaterial substance.

From what you bring out of *Virgil*, your Lordship concludes, † That he, no more than *Cicero*, does me any kindness in this matter, being both assertors of the soul's immortality. My Lord, were not the question of the soul's immateriality, according to custom, changed here into that of its immortality, which I am no less an assertor of than either of them, *Cicero* and *Virgil* do me all the kindness I desired of them in this matter; and that was to shew, that they attributed the word *spiritus* to the soul of man, without any thought of its immateriality; and this the verses you yourself bring out of *Virgil**,

† 1 Anf. p.
62, 63.

* *Æneid*. 4.
385.

*Et cum frigida mors animâ seduxerit artus,
Omnibus umbra locis adero; dabis, improbe, pœnas;*

confirm, as well as those I quoted out of his 6th book: and for this Monsieur de la Loubere shall be my witness in the words above set down out of him; where he shews, that there be those amongst the heathens of our days, as well as *Virgil* and others amongst the antient *Greeks* and *Romans*, who thought the souls or ghosts of men departed did not die with the body, without thinking them to be perfectly immaterial; the latter being much more incomprehensible to them than the former. And what *Virgil's* notion of the soul is, and that *Corpus*, when put in contradistinction to the soul, signifies nothing but the gross tenement of flesh and bones, is evident from this verse of his *Æneid*. 6. where he calls the souls which yet were visible,

—————*Tenues sine corpore vitas.*

Your Lordship's † answer concerning what is said *Eccles.* xii. turns wholly upon *Solomon's* taking the soul to be immortal, which was not what I questioned: † 1 Answer p. 64, 65.
all that I quoted that place for, was to shew, that *spirit* in *English* might properly be applied to the soul, without any notion of its immateriality, as *רוח* was by *Solomon*, which, whether he thought the souls of men to be immaterial, does little appear in that passage, where he speaks of the souls of men and beasts together, as he does. But farther, what I contended for is evident from that place, in that the word *spirit* is there applied, by our translators, to the souls of beasts, which your Lordship, I think, does not rank amongst the immaterial, and consequently immortal *spirits*, though they have sense and spontaneous motion.

But you say, † *If the soul be not of it self a free thinking substance, you do not see what foundation there is in nature for a day of judgment.* † 1 Answer p. 65.
Ans. Though the heathen world did not of old, nor do to this day, see a foundation in nature for a day of judgment; yet in revelation, if that will satisfy your Lordship, every one may see a foundation for a day of judgment, because God has positively declared it; though God has not by that revelation taught us, what the substance of the soul is; nor has any where said, that *the soul* of itself is a free agent. Whatsoever any created substance is, it is not of itself, but is by the good pleasure of its creator: whatever degrees of perfection it has, it has from the bountiful hand of its maker. For it is true in a natural, as well as a spiritual sense, what *St. Paul* says, || *Not that we are sufficient of ourselves to think any thing as of ourselves, but our sufficiency is of God.* || 2 Cor. iii. 5.

But your Lordship, as I guess by your following words, would argue, that a material substance cannot be a free agent; whereby I suppose you only mean, that you cannot see or conceive how a solid substance should begin, stop, or change its own motion. To which give me leave to answer, that when you can make it conceivable,

ceiveable, how any created, finite, dependant substance can move itself, or alter or stop its own motion, which it must to be a *free* agent; I suppose you will find it no harder for God to bestow this power on a solid than an unsolid created substance. Tully, in the place above quoted, * could not conceive this power to be in any thing but what was from eternity; *Cum pateat igitur æternum id esse quod seipsum moveat, quis est qui hanc naturam animis esse tributam neget?* But though you cannot see how any created substance, solid or not solid, can be a *free* agent, (pardon me, my Lord, if I put in both, till your Lordship please to explain it of either, and shew the manner how either of them can, *of itself*, move itself or any thing else) yet I do not think you will so far deny men to be free agents, from the difficulty there is to see how they are free agents, as to doubt whether *there be foundation enough for a day of judgment.*

It is not for me to judge how far your Lordship's speculations reach: but finding in myself nothing to be truer than what the wise Solomon tells me, † *As thou knowest not what is the way of the spirit, nor how the bones do grow in the womb of her that is with child; even so thou knowest not the works of God who maketh all things;* I gratefully receive and rejoice in the light of revelation, which sets me at rest in many things, the manner whereof my poor reason can by no means make out to me: Omnipotency, I know, can do any thing that contains in it no contradiction; so that I readily believe whatever God has declared, though my reason find difficulties in it, which it cannot master. As in the present case, God having revealed that there shall be a day of judgment, I think that *foundation* enough to conclude men are *free* enough to be made answerable for their actions, and to receive according to what they have done; though how man is a *free* agent, surpasses my explication or comprehension.

In answer to the place I brought out of St. Luke †, your Lordship asks, || *Whether from these words of our Saviour it follows, that a spirit is only an appearance?* I answer, No; nor do I know who drew such an inference from them; but it follows, that in *apparitions* there is something that appears, and that which appears is not wholly immaterial; and yet this was properly called πνεῦμα, and was often looked upon, by those who called it πνεῦμα in Greek, and now call it *spirit* in English, to be the ghost or soul of one departed; which I humbly conceive justifies my use of the word *spirit*, for a thinking voluntary agent, whether material or immaterial.

Your Lordship says, * *That I grant, that it cannot upon these principles be demonstrated, that the spiritual substance in us is immaterial; from whence you conclude, That then my grounds of certainty from ideas are plainly given up.* This being a way of arguing that you often

* Tusculan.
Quæst.
L. 1. c. 23.

† Eccl. xi. 5.

† C. xxiv. v.
39. || 1 Anf.
p. 66.

* 1 Anf. p.
67.

being impossible for us, by the contemplation of our own *ideas*, without revelation, to discover, whether Omnipotency has not given to some systems of matter, fitly disposed, a power to perceive and think, or else joined and fixed to matter so disposed a thinking immaterial substance: it being, in respect of our notions, not much more remote from our comprehension to conceive, that GOD can, if he pleases, superadd to matter a faculty of thinking, than that he should superadd to it another substance with a faculty of thinking; since we know not wherein thinking consists, nor to what sort of substances the Almighty has been pleased to give that power, which cannot be in any created being, but merely by the good pleasure and bounty of the Creator. For I see no contradiction in it, that the first eternal thinking being should, if he pleased, give to certain systems of created senseless matter, put together as he thinks fit, some degrees of sense, perception, and thought: though, as I think, I have proved, *lib. 4. chap. 10. §. 14, &c.* it is no less than a contradiction to suppose matter (which is evidently in its own nature void of sense and thought) should be that eternal first thinking being. What certainty of knowledge can any one have, that some perceptions, such as, *v. g.* pleasure and pain, should not be in some bodies themselves, after a certain manner modified and moved, as well as that they should be in an immaterial substance, upon the motion of the parts of body? Body, as far as we can conceive, being able only to strike and affect body; and motion, according to the utmost reach of our *ideas*, being able to produce nothing but motion; so that when we allow

often make use of, I have often had occasion to consider it, and cannot after all see the force of this argument. I acknowledge that this or that proposition cannot upon my principles be demonstrated; *ergo*, I grant this proposition to be false, that certainty consists in the perception of the agreement or disagreement of ideas. For that is my ground of certainty, and till that be given up, *my grounds of certainty* are not given up.

it

it to produce pleasure or pain, or the *idea* of a colour or sound, we are fain to quit our reason, go beyond our *ideas*, and attribute it wholly to the good pleasure of our Maker. For, since we must allow he has annexed effects to motion which we can no way conceive motion able to produce, what reason have we to conclude, that he could not order them as well to be produced in a subject we cannot conceive capable of them, as well as in a subject we cannot conceive the motion of matter can any way operate upon? I say not this, that I would any way lessen the belief of the soul's immateriality: I am not here speaking of probability, but knowledge; and I think not only, that it becomes the modesty of philosophy, not to pronounce magisterially, where we want that evidence that can produce knowledge; but also, that it is of use to us, to discern how far our knowledge does reach; for the state we are at present in not being that of vision, we must, in many things, content ourselves with faith and probability; and in the present question, about the immateriality of the soul, if our faculties cannot arrive at demonstrative certainty, we need not think it strange. All the great ends of morality and religion are well enough secured, without philosophical proofs of the soul's immateriality: since it is evident, that he who made us at first begin to subsist here, sensible intelligent beings, and for several years continued us in such a state, can and will restore us to the like state of sensibility in another world, and make us capable there to receive the retribution he has designed to men, according to their doings in this life. And therefore it is not of such mighty necessity to determine one way or the other, as some over zealous for, or against the immateriality of the soul, have been forward to make the world believe. Who, either on the one side, indulging too much their thoughts immersed altogether in matter, can allow no existence to what is not material: or who, on the other side, finding not *cogitation* within the natural powers of matter, examined

amined over and over again, by the utmost intention of mind, have the confidence to conclude, that Omnipotency itself cannot give perception and thought to a substance which has the modification of solidity. He that considers how hardly sensation is, in our thoughts, reconcileable to extended matter, or existence to any thing that hath no extension at all, will confess that he is very far from certainly knowing what his soul is. It is a point, which seems to me to be put out of the reach of our knowledge: and he who will give himself leave to consider freely, and look into the dark and intricate part of each hypothesis, will scarce find his reason able to determine him fixedly for, or against the soul's materiality. Since, on which side soever he views it, either as an unextended substance, or as a thinking extended matter; the difficulty to conceive either will, whilst either alone is in his thoughts, still drive him to the contrary side. An unfair way which some men take with themselves; who, because of the unconceivableness of something they find in one, throw themselves violently into the contrary hypothesis, though altogether as unintelligible to an unbiassed understanding. This serves not only to shew the weakness and scantiness of our knowledge, but the insignificant triumph of such sort of arguments, which, drawn from our own views, may satisfy us that we can find no certainty on one side of the question; but do not at all thereby help us to truth, by running into the opposite opinion, which, on examination, will be found clogged with equal difficulties. For what safety, what advantage to any one is it, for the avoiding the seeming absurdities, and, to him, unfurmountable rubs he meets with in one opinion, to take refuge in the contrary, which is built on something altogether as inexplicable, and as far remote from his comprehension? It is past controversy, that we have in us something that thinks; our very doubts about what it is, confirm the certainty of its being, though we must content ourselves in the ignorance of what

what kind of *being* it is: and it as vain to go about to be sceptical in this, as it is unreasonable in most other cases to be positive against the being of any thing, because we cannot comprehend its nature. For I would fain know what substance exists, that has not something in it which manifestly baffles our understandings. Other spirits, who see and know the nature and inward constitution of things, how much must they exceed us in knowledge? To which if we add larger comprehension, which enables them at one glance to see the connexion and agreement of very many *ideas*, and readily supplies to them the intermediate proofs, which we, by single and slow steps, and long poring in the dark, hardly at last find out, and are often ready to forget one before we have hunted out another; we may guess at some part of the happiness of superior ranks of spirits, who have a quicker and more penetrating sight, as well as a larger field of knowledge. But to return to the argument in hand; our *knowledge*, I say, is not only limited to the paucity and imperfections of the *ideas* we have, and which we employ it about, but even comes short of that too: but how far it reaches let us now enquire.

How far our knowledge reaches. §. 7. The affirmations or negations we make concerning the *ideas* we have, may, as I have before intimated in general, be reduced to these four sorts, *viz.* identity, co-existence, relation, and real existence. I shall examine how far our knowledge extends in each of these.

First, Our knowledge of identity and diversity, as far as our *ideas*. §. 8. *First, as to identity and diversity;* in this way of the agreement or disagreement of *our ideas*, *our intuitive knowledge is as far extended as our ideas themselves;* and there can be no *idea* in the mind, which it does not presently, by an intuitive knowledge, perceive to be what it is, and to be different from any other.

§. 9. *Secondly, As to the second sort, which is the agreement or disagreement of our ideas in co-existence; in this our knowledge is very short, though in this consists the greatest and most material part of our knowledge concerning substances. For, our ideas of the species of substances being, as I have shewed, nothing but certain collections of simple ideas united in one subject, and so co-existing together: v. g. Our idea of flame is a body hot, luminous, and moving upward; of gold, a body heavy to a certain degree, yellow, malleable, and fusible: these, or some such complex ideas as these in men's minds, do these two names of the different substances flame and gold stand for. When we would know any thing farther concerning these, or any other sort of substances, what do we enquire, but what other qualities, or powers, these substances have, or have not? Which is nothing else but to know, what other simple ideas do, or do not co-exist with those that make up that complex idea.*

Secondly, Of co-existence, a very little way.

§. 10. This, how weighty and considerable a part soever of human science, is yet very narrow, and scarce any at all. The reason whereof is, that the simple ideas, whereof our complex ideas of substances are made up, are, for the most part, such as carry with them, in their own nature, no visible necessary connexion or inconsistency with any other simple ideas, whose co-existence with them we should inform ourselves about.

Because the connexion between most simple ideas is unknown.

§. 11. The ideas, that our complex ones of substances are made up of, and about which our knowledge concerning substances is most employed, are those of their *secondary qualities*; which depending all (as has been shewn) upon the primary qualities of their minute and insensible parts; or, if not upon them, upon something yet more remote from our comprehension, it is impossible we should know which have a necessary union or inconsistency

Especially of secondary qualities.

consistency one with another: for, not knowing the root they spring from, not knowing what size, figure, and texture of parts they are, on which depend and from which result those qualities which make our complex *idea* of *gold*, it is impossible we should know what other qualities result from or are incompatible with the same constitution of the insensible parts of *gold*; and so consequently must always *co-exist* with that complex *idea* we have of it, or else are *inconsistent* with it.

Because all connexion between any secondary and primary qualities is undiscoversable.

§. 12. Besides this ignorance of the primary qualities of the insensible parts of bodies, on which depend all their secondary qualities, there is yet another and more incurable part of ignorance, which sets us more remote from a certain knowledge of the *co-existence* or *incoexistence* (if I may so say) of different *ideas* in the same subject; and that is, that there is no discoverable connexion between any *secondary quality*, and *those primary qualities* which it depends on.

§. 13. That the size, figure, and motion of one body should cause a change in the size, figure and motion of another body, is not beyond our conception: the separation of the parts of one body, upon the intrusion of another; and the change from rest to motion, upon impulse; these, and the like, seem to us to have some *connexion* one with another. And if we knew these primary qualities of bodies, we might have reason to hope we might be able to know a great deal more of these operations of them one upon another: but our minds not being able to discover any *connexion* betwixt these primary qualities of bodies, and the sensations that are produced in us by them, we can never be able to establish certain and undoubted rules of the consequence or *co-existence* of any secondary qualities, though we could discover the size, figure or motion of those invisible parts, which immediately produce them. We are so far from knowing what figure, size or motion of parts produce a yellow colour, a sweet taste, or a sharp sound, that we can by no means conceive how any

size, figure or motion of any particles can possibly produce in us the *idea* of any *colour, taste, or sound* whatsoever; there is no conceivable *connexion* betwixt the one and the other.

§. 14. In vain therefore shall we endeavour to discover by our *ideas* (the only true way of certain and universal knowledge) what other *ideas* are to be found constantly joined with that of our complex *idea* of any substance; since we neither know the real constitution of the minute parts on which their qualities do depend; nor, did we know them, could we discover any necessary *connexion* between them, and any of the *secondary qualities*: which is necessary to be done, before we can certainly know their *necessary co-existence*. So that, let our complex *idea* of any species of substances be what it will, we can hardly, from the simple *ideas* contained in it, certainly determine the *necessary co-existence* of any other quality whatsoever. Our knowledge in all these enquiries reaches very little farther than our experience. Indeed some few of the primary qualities have a necessary dependence, and visible connexion one with another; as figure necessarily supposes extension; receiving or communicating motion by impulse supposes solidity. But though these, and perhaps some other of our *ideas* have, yet there are so few of them that have, a *visible connexion* one with another, that we can by intuition or demonstration discover the co-existence of very few of the qualities that are to be found united in substances; and we are left only to the assistance of our senses, to make known to us what qualities they contain. For, of all the qualities that are *co-existent* in any subject, without this dependence and evident connexion of their *ideas* one with another, we cannot know certainly any two to *co-exist*, any farther than experience, by our senses, informs us. Thus, though we see the yellow colour, and upon trial find the weight, malleableness, fusibility, and fixedness, that are united in a piece of gold; yet, because no one of these *ideas* has any evident *dependence, or necessary connexion*

nexion with the other, we cannot certainly know, that where any four of these are, the fifth will be there also, how highly probable soever it may be: because the highest probability amounts not to certainty; without which there can be no true knowledge. For this *co-existence* can be no farther known, than it is perceived; and it cannot be perceived but either in particular subjects, by the observation of our senses, or in general, by the necessary *connexion* of the *ideas* themselves.

§. 15. *As to incompatibility or repugnancy to co-existence*, we may know, that any subject can have, of each sort of primary qualities, but one particular at once; v. g. each particular extension, figure, number of parts, motion, excludes all other of each kind. The like also is certain of all sensible *ideas* peculiar to each sense; for whatever of each kind is present in any subject, excludes all other of that sort; v. g. no one subject can have two smells, or two colours, at the same time. To this, perhaps, will be said, has not an *opall*, or an infusion of *lignum nephriticum*, two colours at the same time? To which I answer, that these bodies, to eyes differently placed, may at the same time afford different colours: but I take liberty also to say, that to eyes differently placed, it is different parts of the object that reflect the particles of light: and therefore it is not the same part of the object, and so not the very same subject, which at the same time appears both yellow and azure. For it is as impossible that the very same particle of any body should at the same time differently modify or reflect the rays of light, as that it should have two different figures and textures at the same time.

Of the co-existence of powers, a very little way.

§. 16. But *as to the powers of substances to change the sensible qualities of other bodies*, which make a great part of our enquiries about them, and is no inconsiderable branch of our knowledge; I doubt, as to these, whether our *knowledge reaches* much farther than our experience;

experience; or whether we can come to the discovery of most of these powers, and be certain that they are in any subject by the connexion with any of those *ideas*, which to us make its essence. Because, the active and passive powers of bodies, and their ways of operating, consisting in a texture and motion of parts, which we cannot by any means come to discover; it is but in very few cases we can be able to perceive their dependence on, or repugnance to any of those *ideas*, which make our complex one of that sort of things. I have here instanced in the corpuscularian hypothesis, as that which is thought to go farthest in an intelligible explication of the qualities of bodies; and I fear the weakness of human understanding is scarce able to substitute another, which will afford us a fuller and clearer discovery of the necessary connexion and *co-existence* of the powers, which are to be observed united in several sorts of them. This at least is certain, that whichever hypothesis be clearest and truest, (for of that it is not my business to determine) our knowledge concerning corporeal substances will be very little advanced by any of them, till we are made to see what qualities and powers of bodies have a *necessary connexion or repugnancy* one with another; which, in the present state of philosophy, I think, we know but to a very small degree: and I doubt whether, with those faculties we have, we shall ever be able to carry our general knowledge (I say not particular experience) in this part much farther. Experience is that, which in this part we must depend on. And it were to be wished, that it were more improved. We find the advantages some men's generous pains have this way brought to the stock of natural knowledge. And if others, especially the philosophers by fire, who pretend to it, had been so wary in their observations, and sincere in their reports, as those who call themselves philosophers ought to have been; our acquaintance with the bodies here about us, and our insight into their powers and operations, had been yet much greater.

Of spirits yet
narrower.

§. 17. If we are at a loss in respect of the powers and operations of bodies, I think it is easy to conclude, *we are much more in the dark in reference to spirits*; whereof we naturally have no *ideas*, but what we draw from that of our own, by reflecting on the operations of our own souls within us, as far as they can come within our observation. But how inconsiderable a rank the spirits that inhabit our bodies hold amongst those various, and possibly innumerable, kinds of nobler beings; and how far short they come of the endowments and perfections of cherubims and seraphims, and infinite sorts of spirits above us, is what, by a transient hint, in another place, I have offered to my reader's consideration.

Thirdly, Of
other relations
it is not easy to
say how far.

§. 18. As to the third sort of our knowledge, *viz. the agreement or disagreement of any of our ideas in any other relation*: this, as it is the largest field of our knowledge, so it is hard to determine how far it may extend: because the advances that are made in this part of knowledge depending on our sagacity in finding intermediate *ideas*, that may shew the *relations* and *habitudes* of *ideas*, whose co-existence is not considered, it is a hard matter to tell, when we are at an end of such discoveries; and when reason has all the helps it is capable of, for the finding of proofs, or examining the agreement or disagreement of remote *ideas*. They that are ignorant of *algebra*, cannot imagine the wonders in this kind are to be done by it; and what further improvements and helps, advantageous to other parts of knowledge, the sagacious mind of man may yet find out, it is not easy to determine. This at least I believe, that the *ideas* of quantity are not those alone that are capable of demonstration and knowledge; and that other, and perhaps more useful parts of contemplation, would afford us certainty, if vices, passions, and domineering interest did not oppose, or menace such endeavours.

The

The *idea* of a supreme Being, infinite in power, goodness and wisdom, whose workmanship we are, and on whom we depend; and the *idea* of ourselves, as understanding rational beings, being such as are clear in us, would, I suppose, if duly considered and pursued, afford such foundations of our duty and rules of action, as might place *morality amongst the sciences capable of demonstration*: wherein I doubt not, but from self-evident propositions, by necessary consequences, as incontestable as those in mathematicks, the measures of right and wrong might be made out, to any one that will apply himself with the same indifferency and attention to the one, as he does to the other of these sciences. The *relation* of other *modes* may certainly be perceived, as well as those of number and extension: and I cannot see why they should not also be capable of demonstration, if due methods were thought on to examine, or pursue their agreement or disagreement. *Where there is no property, there is no injustice*, is a proposition as certain as any demonstration in *Euclid*: for the *idea* of property being a right to any thing; and the *idea* to which the name *injustice* is given, being the invasion or violation of that right; it is evident, that these *ideas* being thus established, and these names annexed to them, I can as certainly know this proposition to be true, as that a triangle has three angles equal to two right ones. Again, *no government allows absolute liberty*: the *idea* of government being the establishment of society upon certain rules or laws, which require conformity to them; and the *idea* of absolute liberty being for any one to do whatever he pleases; I am as capable of being certain of the truth of this proposition, as of any in the mathematicks.

Morality capable of demonstration.

§. 19. That which in this respect has given the advantage to the *ideas* of quantity, and made them thought more capable of certainty and demonstration, is,

Two things have made moral *ideas* thought incapable of demonstration: their complexedness, and want of sensible representations.

First, That they can be set down and represented by sensible marks, which have a greater and nearer correspondence with them than any words or sounds whatsoever. Diagrams drawn on paper are copies of the *ideas* in the mind, and not liable to the uncertainty that words carry in their signification. An angle, circle, or square, drawn in lines, lies open to the view, and cannot be mistaken: it remains unchangeable, and may at leisure be considered and examined, and the demonstration be revised, and all the parts of it may be gone over more than once, without any danger of the least change in the *ideas*. This cannot be thus done in *moral ideas*; we have no sensible marks that resemble them, whereby we can set them down; we have nothing but words to express them by; which though when written they remain the same, yet the *ideas* they stand for may change in the same man; and it is very seldom that they are not different in different persons.

Secondly, Another thing that makes the greater difficulty in *Ethicks*, is, that *moral ideas* are commonly more complex than those of the figures ordinarily considered in mathematicks. From whence these two inconveniencies follow: *First*, that their names are of more uncertain signification, the precise collection of simple *ideas* they stand for not being so easily agreed on: and so the sign that is used for them, in communication always, and in thinking often, does not steadily carry with it the same *idea*. Upon which the same disorder, confusion and error follows, as would if a man, going to demonstrate something of an *heptagon*, should in the diagram he took to do it, leave out one of the angles, or by oversight make the figure with one angle more than the name ordinarily imported, or he intended it should, when at first he thought of his demonstration. This often happens, and is hardly avoidable in very complex *moral ideas*, where the same name being retained, one angle, *i. e.* one simple *idea*, is left out or put in, in the complex one, (still called by

by the same name) more at one time than another. Secondly, from the complexedness of these moral *ideas* there follows another inconvenience, (*viz.*) that the mind cannot easily retain those precise combinations, so exactly and perfectly, as is necessary in the examination of the habitudes and correspondencies, agreements or disagreements of several of them one with another; especially where it is to be judged of by long deductions, and the intervention of several other complex *ideas*, to shew the agreement or disagreement of two remote ones.

The great help against this, which mathematicians find in diagrams and figures which remain unalterable in their draughts, is very apparent; and the memory would often have great difficulty otherwise to retain them so exactly, whilst the mind went over the parts of them, step by step, to examine their several correspondencies: and though in casting up a long sum, either in *addition*, *multiplication*, or *division*, every part be only a progression of the mind, taking a view of its own *ideas*, and considering their agreement or disagreement; and the resolution of the question be nothing but the result of the whole, made up of such particulars, whereof the mind has a clear perception; yet, without setting down the several parts by marks whose precise significations are known, and by marks that last and remain in view when the memory had let them go, it would be almost impossible to carry so many different *ideas* in mind, without confounding, or letting slip some parts of the reckoning, and thereby making all our reasonings about it useless. In which case, the cyphers or marks help not the mind at all to perceive the agreement of any two or more numbers, their equalities or proportions: that the mind has only by intuition of its own *ideas* of the numbers themselves. But the numerical characters are helps to the memory, to record and retain the several *ideas* about which the demonstration is made, whereby a man may know how far his intuitive knowledge, in surveying several of the

P 3

particulars,

particulars, has proceeded; that so he may, without confusion, go on to what is yet unknown, and, at last, have in one view before him the result of all his perceptions and reasonings.

Remedies of
those difficul-
ties.

§. 20. One part of *these disadvantages* in moral *ideas*, which has made them be thought not capable of demonstration, may in a good measure be *remedied* by definitions, setting down that collection of simple *ideas*, which every term shall stand for, and then using the terms steadily and constantly for that precise collection. And what methods *algebra*, or something of that kind, may hereafter suggest, to remove the other difficulties, is not easy to foretel. Confident I am, that if men would in the same method, and with the same indifferency, search after moral, as they do mathematical truths, they would find them to have a stronger connexion one with another, and a more necessary consequence from our clear and distinct *ideas*, and to come nearer perfect demonstration, than is commonly imagined. But much of this is not to be expected, whilst the desire of esteem, riches, or power, makes men espouse the well-endowed opinions in fashion, and then seek arguments, either to make good their beauty, or varnish over and cover their deformity. Nothing being so beautiful to the eye, as truth is to the mind; nothing so deformed and irreconcilable to the understanding, as a lye. For though many a man can with satisfaction enough own a no very handsome wife in his bosom; yet who is bold enough openly to avow, that he has espoused a falshood, and received into his breast so ugly a thing as a lye? Whilst the parties of men cram their tenets down all men's throats whom they can get into their power, without permitting them to examine their truth or falshood, and will not let truth have fair-play in the world, nor men the liberty to search after it: what improvements can be expected of this kind? What greater light can be hoped for in the moral sciences? The subject part of mankind, in most places, might, instead

instead thereof, with *Ægyptian* bondage, expect *Ægyptian* darkness, were not the candle of the Lord set up by himself in men's minds, which it is impossible for the breath or power of man wholly to extinguish.

§. 21. As to the fourth sort of our knowledge, *viz. of the real actual existence* of things, we have an intuitive knowledge of our own *existence*; a demonstrative knowledge of the *existence* of a God; of the *existence* of any thing else we have no other but a sensitive knowledge, which extends not beyond the objects present to our senses.

Fourthly, Of real existence, we have an intuitive knowledge of our own; demonstrative, of God's; sensitive, of some few other things.

Our ignorance great.

§. 22. Our knowledge being so narrow, as I have shewed, it will, perhaps, give us some light into the present state of our minds, if we look a little into the dark side, and take a view of our ignorance; which being infinitely larger than our knowledge, may serve much to the quieting of disputes, and improvement of useful knowledge; if, discovering how far we have clear and distinct *ideas*, we confine our thoughts within the contemplation of those things that are within the reach of our understandings, and launch not out into that abyss of darkness (where we have not eyes to see, nor faculties to perceive any thing) out of a presumption that nothing is beyond our comprehension. But to be satisfied of the folly of such a conceit, we need not go far. He that knows any thing, knows this in the first place, that he need not seek long for instances of his ignorance. The meanest and most obvious things that come in our way, have dark sides, that the quickest sight cannot penetrate into. The clearest and most enlarged understandings of thinking men find themselves puzzled, and at a loss, in every particle of matter. We shall the less wonder to find it so, when we consider the *causes of our ignorance*, which, from what has been said, I suppose, will be found to be chiefly these three:

First, Want of ideas.

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Secondly,

Secondly, Want of a discoverable connexion between the *ideas* we have.

Thirdly, Want of tracing and examining our *ideas*.

First, One cause of it, want of *ideas*, either such as we have no conception of, or such as particularly we have not.

§. 23. *First*, There are some things, and those not a few, that we are ignorant of for want of *ideas*.

First, All the simple *ideas* we have, are confined (as I have shewn) to those we receive from corporeal objects by *sensation*, and from the operations of our own minds as the objects of *reflection*. But how much

these few and narrow inlets are disproportionate to the vast whole extent of all beings, will not be hard to persuade those who are not so foolish as to think their span the measure of all things. What other simple *ideas* it is possible the creatures in other parts of the universe may have, by the assistance of senses and faculties more or perfecter than we have, or different from ours, it is not for us to determine: but to say, or think there are no such, because we conceive nothing of them, is no better an argument, than if a blind man should be positive in it, that there was no such thing as sight and colours, because he had no manner of idea of any such thing, nor could by any means frame to himself any notions about seeing. The ignorance and darkness that is in us, no more hinders nor confines the knowledge that is in others, than the blindness of a mole is an argument against the quick-sightedness of an eagle. He that will consider the infinite power, wisdom, and goodness of the Creator of all things, will find reason to think it was not all laid out upon so inconsiderable, mean and impotent a creature, as he will find man to be; who, in all probability, is one of the lowest of all intellectual beings. What faculties therefore other species of creatures have to penetrate into the nature, and inmost constitutions of things; what *ideas* they may receive of them, far different from ours, we know not. This we know, and certainly find, that we want several other views of them,

them, besides those we have, to make discoveries of them more perfect. And we may be convinced that the *ideas* we can attain to by our faculties, are very disproportionate to things themselves, when a positive, clear, distinct one of substance itself, which is the foundation of all the rest, is concealed from us. But want of *ideas* of this kind being a part as well as cause of our ignorance, cannot be described. Only this, I think, I may confidently say of it, that the intellectual and sensible world are in this perfectly alike; that that part, which we see of either of them, holds no proportion with what we see not; and whatsoever we can reach with our eyes, or our thoughts, of either of them, is but a point, almost nothing, in comparison of the rest.

§. 24. *Secondly*, Another great cause of ignorance is the *want of ideas we are capable of*. As the want of *ideas*, which our faculties are not able to give us, shuts us wholly from those views of things which it is reasonable to think other beings, perfecter than we, have, of which we know nothing; so the want of *ideas*, I now speak of, keeps us in ignorance of things we conceive capable of being known to us. *Bulk, figure, and motion*, we have *ideas* of. But though we are not without *ideas* of these primary qualities of bodies in general, yet not knowing what is the particular *bulk, figure, and motion*, of the greatest part of the bodies of the universe, we are ignorant of the several powers, efficacies, and ways of operation, whereby the effects, which we daily see, are produced. These are hid from us in some things, by being *too remote*; and in others, by being *too minute*. When we consider the vast distance of the known and visible parts of the world, and the reasons we have to think, that what lies within our ken is but a small part of the immense universe, we shall then discover an huge abyss of ignorance. What are the particular fabricks of the great masses of matter, which make up the whole stupendous

Because of
their remoteness; or,

pendous frame of corporeal beings; how far they are extended, what is their motion, and how continued, or communicated; and what influence they have one upon another, are contemplations, that at first glimpse our thoughts lose themselves in. If we narrow our contemplation, and confine our thoughts to this little canton, I mean this system of our sun, and the grosser masses of matter that visibly move about it, what several sorts of vegetables, animals, and intellectual corporeal beings, infinitely different from those of our little spot of earth, may there probably be in the other planets, to the knowledge of which, even of their outward figures and parts, we can no way attain, whilst we are confined to this earth, there being no natural means, either by sensation or reflection, to convey their certain *ideas* into our minds? They are out of the reach of those inlets of all our knowledge; and what sorts of furniture and inhabitants those mansions contain in them, we cannot so much as guess, much less have clear and distinct *ideas* of them.

Because of
their minute-
ness.

§. 25. If a great, nay, far the greatest part of the several ranks of *bodies* in the universe, escape our notice by their remoteness, there are others that are no less concealed from us by their *minuteness*. These insensible corpuscles, being the active parts of matter, and the great instruments of nature, on which depend not only all their secondary qualities, but also most of their natural operations, our want of precise distinct *ideas* of their primary qualities, keeps us in an incurable ignorance of what we desire to know about them. I doubt not, but if we could discover the figure, size, texture, and motion of the minute constituent parts of any two bodies, we should know without trial several of their operations one upon another, as we do now the properties of a square, or a triangle. Did we know the mechanical affections of the particles of *rhubarb*, *hemlock*, *opium*, and a *man*, as a watchmaker does those of a watch, whereby it performs its operations,

tions, and of a file, which, by rubbing on them, will alter the figure of any of the wheels, we should be able to tell beforehand, that *rhubarb* will purge, *kemlock* kill, and *opium* make a man sleep, as well as a watchmaker can, that a little piece of paper laid on the balance will keep the watch from going, till it be removed; or that some small part of it, being rubbed by a file, the machine would quite lose its motion, and the watch go no more. The dissolving of silver in *aqua fortis*, and gold in *aqua regia*, and not *vice versa*, would be then perhaps no more difficult to know, than it is to a smith to understand why the turning of one key will open a lock, and not the turning of another. But whilst we are destitute of senses acute enough to discover the minute particles of bodies, and to give us *ideas* of their mechanical affections, we must be content to be ignorant of their properties and ways of operation; nor can we be assured about them any farther than some few trials we make are able to reach. But whether they will succeed again another time, we cannot be certain. This hinders our certain knowledge of universal truths concerning natural bodies; and our reason carries us herein very little beyond particular matter of fact.

§. 26. And therefore I am apt to doubt, that how far soever human industry may advance useful and *experimental* philosophy in *physical things*, *scientific* will still be out of our reach; because we want perfect and adequate *ideas* of those very bodies, which are nearest to us, and most under our command. Those which we have ranked into classes, under names, and we think ourselves best acquainted with, we have but very imperfect and incomplete *ideas* of. Distinct *ideas* of the several sorts of bodies, that fall under the examination of our senses, perhaps, we may have; but adequate *ideas*, I suspect, we have not of any one amongst them. And though the former of these will serve us for common use and discourse, yet, whilst we want the latter,

we

Hence no science of bodies.

we are not capable of *scientific knowledge*; nor shall ever be able to discover general, instructive, unquestionable truths concerning them. *Certainty* and *demonstration* are things we must not, in these matters, pretend to. By the colour, figure, taste, and smell, and other sensible qualities, we have as clear and distinct *ideas* of sage and hemlock, as we have of a circle and a triangle: but having no *ideas* of the particular primary qualities of the minute parts of either of these plants, nor of other bodies which we would apply them to, we cannot tell what effects they will produce; nor, when we see those effects, can we so much as guess, much less know, their manner of production. Thus, having no *ideas* of the particular mechanical affections of the minute parts of bodies, that are within our view and reach, we are ignorant of their constitutions, powers, and operations: and of bodies more remote we are yet more ignorant, not knowing so much as their very outward shapes, or the sensible and grosser parts of their constitutions.

Much less of
spirits.

§. 27. This at first sight, will shew us how disproportionate our knowledge is to the whole extent even of material beings; to which if we add the consideration of that infinite number of *spirits* that may be, and probably are, which are yet more remote from our knowledge, whereof we have no cognizance, nor can frame to ourselves any distinct *ideas* of their several ranks and sorts, we shall find this cause of ignorance conceal from us, in an impenetrable obscurity, almost the whole intellectual world; a greater certainly, and more beautiful world than the material. For, bating some very few, and those, if I may so call them, superficial *ideas* of spirit, which by reflection we get of our own, and from thence, the best we can collect, of the Father of all spirits, the eternal independent Author of them and us, and all things; we have no certain information so much as of the existence of other spirits, but by revelation. Angels of all sorts are naturally
beyond

beyond our discovery: and all those intelligences, whereof it is more likely there are more orders than of corporeal substances, are things whereof our natural faculties give us no certain account at all. That there are minds, and thinking beings in other men as well as himself, every man has a reason, from their words and actions, to be satisfied: and the knowledge of his own mind cannot suffer a man, that considers, to be ignorant that there is a GOD. But that there are degrees of spiritual beings between us and the great GOD, who is there, that by his own search and ability can come to know? Much less have we distinct *ideas* of their different natures, conditions, states, powers, and several constitutions, wherein they agree or differ from one another, and from us. And therefore in what concerns their different species and properties, we are under an absolute ignorance.

§. 28. *Secondly*, What a small part of the substantial beings that are in the universe, the want of *ideas* leave open to our knowledge, we have seen. In the next place, another cause of ignorance, of no less moment, is a want of a *discoverable connexion* between those *ideas* we have. For, wherever we want that, we are utterly incapable of universal and certain knowledge; and are, as in the former case, left only to observation and experiment; which, how narrow and confined it is, how far from general knowledge, we need not be told. I shall give some few instances of this cause of our ignorance, and so leave it. It is evident that the bulk, figure, and motion of several bodies about us, produce in us several sensations, as of colours, sounds, tastes, smells, pleasure and pain, &c. These mechanical affections of bodies having no affinity at all with those *ideas* they produce in us, (there being no conceivable connexion between any impulse of any sort of body, and any perception of a colour or smell, which we find in our minds) we can have no distinct knowledge of such operations beyond

Secondly,
Want of a discoverable connexion between *ideas* we have.

yond our experience; and can reason no otherwise about them, than as effects produced by the appointment of an infinitely wise agent, which perfectly surpasses our comprehensions. As the *ideas* of sensible secondary qualities, which we have in our minds, can by us be no way deduced from bodily causes, nor any correspondence or connexion be found between them and those primary qualities which (experience shews us) produce them in us; so, on the other side, the operation of our minds upon our bodies is as unconceivable. How any thought should produce a motion in body, is as remote from the nature of our *ideas*, as how any body should produce any thought in the mind. That it is so, if experience did not convince us, the consideration of the things themselves would never be able, in the least, to discover to us. These, and the like, though they have a constant and regular connexion, in the ordinary course of things; yet that connexion being not discoverable in the *ideas* themselves, which appearing to have no necessary dependance one on another, we can attribute their connexion to nothing else, but the arbitrary determination of that all-wise agent, who has made them to be, and to operate as they do, in a way wholly above our weak understandings to conceive.

Instances.

§. 29. In some of our *ideas* there are certain relations, habitudes, and connexions, so visibly included in the nature of the *ideas* themselves, that we cannot conceive them separable from them by any power whatsoever. And in these only we are capable of certain and universal knowledge. Thus the *idea* of a right-lined triangle necessarily carries with it an equality of its angles to two right ones. Nor can we conceive this relation, this connexion of these *two ideas*, to be possibly mutable, or to depend on any arbitrary power, which of choice made it thus, or could make it otherwise. But the coherence and continuity of the parts of matter; the production of sensation in us of colours and sounds, &c. by impulse and

and motion; nay, the original rules and communication of motion being such, wherein we can discover no natural connexion with any *ideas* we have, we cannot but ascribe them to the arbitrary will and good pleasure of the wise architect. I need not, I think, here mention the resurrection of the dead, the future state of this globe of earth, and such other things, which are by every one acknowledged to depend wholly on the determination of a free agent. The things that, as far as our observation reaches, we constantly find to proceed regularly, we may conclude, do act by a law set them; but yet by a law that we know not: whereby, though causes work steadily, and effects constantly flow from them, yet their *connexions* and *dependencies* being not discoverable in our *ideas*, we can have but an experimental knowledge of them. From all which it is easy to perceive, what a darkness we are involved in, how little it is of being, and the things that are, that we are capable to know. And therefore we shall do no injury to our knowledge when we modestly think with ourselves, that we are so far from being able to comprehend the whole nature of the universe, and all the things contained in it, that we are not capable of a philosophical *knowledge* of the bodies that are about us, and make a part of us. Concerning their secondary qualities, powers and operations, we can have no universal certainty. Several effects come every day within the notice of our senses, of which we have so far *sensitive knowledge*: but the causes, manner and certainty of their production, for the two foregoing reasons, we must be content to be ignorant of. In these we can go no farther than particular experience informs us of matter of fact, and by analogy to guess what effects the like bodies are, upon other trials, like to produce. But as to a perfect *science* of natural bodies, (not to mention spiritual beings) we are, I think, so far from being capable of any such thing, that I conclude it lost labour to seek after it.

Thirdly, want
of tracing our
ideas.

§. 30. *Thirdly*, Where we have adequate *ideas*, and where there is a certain and discoverable connexion between them, yet we are often ignorant, for want of *tracing* those *ideas*, which we have, or may have; and for want of finding out those intermediate *ideas*, which may shew us what habitude of agreement or disagreement they have one with another. And thus many are ignorant of mathematical truths, not out of any imperfection of their faculties, or uncertainty in the things themselves, but for want of application in acquiring, examining, and by due ways comparing those *ideas*. That which has most contributed to hinder the due *tracing* of our *ideas*, and finding out their relations, and agreements or disagreements one with another, has been, I suppose, the ill use of *words*. It is impossible that men should ever truly seek, or certainly discover the agreement or disagreement of *ideas* themselves, whilst their thoughts flutter about, or stick only in sounds of doubtful and uncertain significations. Mathematicians, abstracting their thoughts from names, and accustoming themselves to set before their minds the *ideas* themselves that they would consider, and not sounds instead of them, have avoided thereby a great part of that perplexity, puddering and confusion, which has so much hindered men's progress in other parts of knowledge. For, whilst they stick in words of undetermined and uncertain signification, they are unable to distinguish true from false, certain from probable, consistent from inconsistent, in their own opinions. This having been the fate or misfortune of a great part of the men of letters, the increase brought into the stock of real knowledge has been very little, in proportion to the schools, disputes, and writings, the world has been filled with; whilst students being lost in the great wood of words, knew not whereabout they were, how far their discoveries were advanced, or what was wanting in their own, or the general stock of knowledge. Had men, in the discoveries of the material, done as they

they have in those of the intellectual world, involved all in the obscurity of uncertain and doubtful ways of talking, volumes writ of navigation and voyages, theories and stories of zones and tides, multiplied and disputed, nay, ships built, and fleets set out, would never have taught us the way beyond the line; and the *Antipodes* would be still as much unknown, as when it was declared heresy to hold there were any. But having spoken sufficiently of words, and the ill or careless use that is commonly made of them, I shall not say any thing more of it here.

§. 31. Hitherto we have examined the *extent* of our knowledge, in respect to the several sorts of beings that are. There is another *extent of it, in respect of universality*, which will also deserve to be considered; and in this regard, our knowledge follows the nature of our *ideas*. If the *ideas* are abstract, whose agreement or disagreement we perceive, our knowledge is universal. For what is known of such general *ideas*, will be true of every particular thing, in which that essence, *i. e.* that *abstract idea*, is to be found: and what is once known of such *ideas*, will be perpetually and for ever true. So that, as to all general knowledge, we must search and find it only in our own minds, and it is only the examining of our own *ideas* that furnisheth us with that. Truths belonging to essences of things (that is, to *abstract ideas*) are eternal, and are to be found out by the contemplation only of those essences; as the existence of things is to be known only from experience. But having more to say of this in the chapters where I shall speak of general and real knowledge, this may here suffice as to the universality of our knowledge in general.

Extent in respect of universality.

C H A P. IV.

Of the Reality of Human Knowledge.

Objection,
Knowledge
placed in *ideas*,
may be all bare
vision.

§. 1. **I** Doubt not but my reader by this time may be apt to think, that I have been all this while only building a castle in the air; and be ready to say to me, to what purpose all this stir? Knowledge, say you, is only the perception of the agreement or disagreement of our own *ideas*: but who knows what those *ideas* may be? Is there any thing so extravagant, as the imaginations of men's brains? Where is the head that has no *chimeras* in it? Or, if there be a sober and a wise man, what difference will there be, by your rules, between his knowledge, and that of the most extravagant fancy in the world? They both have their *ideas*, and perceive their agreement or disagreement one with another. If there be any difference between them, the advantage will be on the warm-headed man's side, as having the more *ideas*, and the more lively: and so, by your rules, he will be the more knowing. If it be true that all knowledge lies only in the perception of the agreement or disagreement of our own *ideas*, the visions of an enthusiast, and the reasonings of a sober man, will be equally certain. It is no matter how things are; so a man observe but the agreement of his own imaginations, and talk conformably, it is all truth, all certainty. Such castles in the air will be as strong holds of truth, as the demonstrations of *Euclid*. That an harpy is not a centaur, is by this way as certain knowledge, and as much a truth, as that a square is not a circle.

But of *what use is all this fine knowledge of men's own imaginations*, to a man that enquires after the reality of things? It matters not what men's fancies are, it is the knowledge of things that is only to be prized: it is this alone gives a value to our reasonings, and
preference

preference to one man's knowledge over another's, that it is of things as they really are, and not of dreams and fancies.

§. 2. To which I answer, that if our knowledge of our *ideas* terminate in them, and reach no farther, where there is something farther intended, our most serious thoughts will be of little more use, than the reveries of a crazy brain; and the truths built thereon of no more weight, than the discourses of a man, who sees things clearly in a dream, and with great assurance utters them. But I hope, before I have done, to make it evident, that this way of certainty, by the knowledge of our own *ideas*, goes a little farther than bare imagination; and I believe it will appear, that all the certainty of general truths a man has, lies in nothing else.

Answer. Not so, where *ideas* agree with things.

§. 3. It is evident, the mind knows not things immediately, but only by the intervention of the *ideas* it has of them. *Our knowledge* therefore is *real*, only so far as there is a conformity between our *ideas* and the reality of things. But what shall be here the criterion? How shall the mind, when it perceives nothing but its own *ideas*, know that they agree with things themselves? This, though it seems not to want difficulty, yet I think there be two sorts of *ideas*, that, we may be assured, agree with things.

§. 4. *First*, The first are simple *ideas*, which since the mind, as has been shewed, can by no means make to itself, must necessarily be the product of things operating on the mind in a natural way, and producing therein those perceptions, which by the wisdom and will of our Maker they are ordained and adapted to. From whence it follows, that *simple ideas are not fictions* of our fancies, but the natural and regular productions of things without us, really operating upon us; and so carry with them all the conformity which is intended, or which our state requires: for they represent to us things un-

As, First, all simple ideas do.

der those appearances which they are fitted to produce in us; whereby we are enabled to distinguish the sorts of particular substances, to discern the states they are in, and so to take them for our necessities, and apply them to our uses. Thus the *idea* of whiteness, or bitterness, as it is in the mind, exactly answering that power which is in any body to produce it there, has all the real conformity it can, or ought to have, with things without us. And this conformity between our simple *ideas*, and the *existence* of things, is sufficient for real knowledge.

Secondly, All complex *ideas*, except of substances.

§. 5. Secondly, All our complex *ideas*, except those of substances, being *archetypes* of the mind's own making, not intended to be the copies of any thing, nor referred to the existence of any thing, as to their originals, *cannot want any conformity necessary to real knowledge*. For that which is not designed to represent any thing but itself, can never be capable of a wrong representation, nor mislead us from the true apprehension of any thing, by its dissimilarity to it: and such, excepting those of substances, are all our complex *ideas*. Which, as I have shewed in another place, are combinations of *ideas*, which the mind, by its free choice, puts together, without considering any connexion they have in nature. And hence it is, that in all these sorts the *ideas* themselves are considered as the *archetypes*, and things no otherwise regarded but as they are conformable to them. So that we cannot but be infallibly certain, that all the knowledge we attain concerning these *ideas* is real, and reaches things themselves. Because, in all our thoughts, reasonings, and discourses of this kind, we intend things no farther, than as they are conformable to our *ideas*. So that in these we cannot miss of a certain and undoubted reality.

§. 6. I doubt not but it will be easily granted, that the *knowledge* we have of *mathematical truths*, is not only certain, but *real knowledge*; and not the bare empty vision of vain insignificant *chimeras* of the brain: and yet, if we will consider, we shall find that it is only of our own *ideas*. The mathematician considers the truth and properties belonging to a rectangle or circle, only as they are in *idea* in his own mind. For it is possible he never found either of them existing mathematically, *i. e.* precisely true in his life. But yet the knowledge he has of any truths or properties belonging to a circle, or any other mathematical figure, is nevertheless true and certain, even of real things existing: because real things are no farther concerned, nor intended to be meant by any such propositions, than as things really agree to those *archetypes* in his mind. Is it true of the *idea* of a *triangle*, that its three angles are equal to two right ones? It is true also of a *triangle*, wherever it really it exists. Whatever other figure exists, that is not exactly answerable to that *idea* of a *triangle* in his mind, is not at all concerned in that proposition. And therefore he is certain all his knowledge concerning such *ideas* is real knowledge; because, intending things no farther than they agree with those his *ideas*, he is sure what he knows concerning those figures, when they have barely an *ideal existence* in his mind, will hold true of them also, when they have a real existence in matter; his consideration being barely of those figures, which are the same, wherever, or however they exist.

Hence the reality of mathematical knowledge.

§. 7. And hence it follows, that *moral knowledge* is as *capable of real certainty*, as mathematicks. For certainty being but the perception of the agreement or disagreement of our *ideas*; and demonstration nothing but the perception of such agreement, by the intervention of other *ideas* or mediums; our *moral ideas*, as well as mathematical, being

And of moral.

ing *archetypes* themselves, and so adequate and complete *ideas*; all the agreement or disagreement, which we shall find in them, will produce real knowledge, as well as in mathematical figures.

Existence not
required to
make it real.

§. 8. For the attaining of *knowledge* and certainty, it is requisite that we have determined *ideas*: and, to make our knowledge *real*, it is requisite that the *ideas* answer their *archetypes*. Nor let it be wondered, that I place the certainty of our knowledge in the consideration of our *ideas*, with so little care and regard (as it may seem) to the real existence of things: since most of those discourses, which take up the thoughts and engage the disputes of those who pretend to make it their business to enquire after truth and certainty, will, I presume, upon examination, be found to be *general propositions*, and notions in which existence is not at all concerned. All the discourses of the mathematicians, about the squaring of a circle, conick sections, or any other part of mathematicks, *concern not the existence* of any of those figures; but their demonstrations, which depend on their *ideas*, are the same, whether there be any square or circle existing in the world, or no. In the same manner, the truth and certainty of *moral* discourses abstracts from the lives of men, and the existence of those virtues in the world, whereof they treat; nor are *Tully's* offices less true, because there is nobody in the world that exactly practises his rules, and lives up to that pattern of a virtuous man, which he has given us, and which existed no where, when he writ, but in *idea*. If it be true in speculation, *i. e.* in *idea*, that *murder deserves death*, it will also be true in reality of any action that exists conformable to that *idea* of *murder*. As for other actions, the truth of that proposition concerns them not. And thus it is of all other species of things, which have no other essences, but those *ideas* which are in the minds of men.

§. 9. But it will here be said, that if *moral knowledge* be placed in the contemplation of our own *moral ideas*, and those, as other modes, be of our own making, what strange notions will there be of *justice* and *temperance*? What confusion of virtues and vices, if every one may make what *ideas* of them he pleases? No confusion nor disorder in the things themselves, nor the reasonings about them; no more than (in mathematics) there would be a disturbance in the demonstration, or a change in the properties of figures, and their relations one to another, if a man should make a triangle with four corners, or a *trapezium* with four right angles; that is, in plain *English*, change the names of the figures, and call that by one name, which mathematicians call ordinarily by another. For, let a man make to himself the *idea* of a figure with three angles, whereof one is a right one, and call it, if he please, *equilaterum* or *trapezium*, or any thing else, the properties of, and demonstrations about that *idea*, will be the same, as if he called it a *rectangular triangle*. I confess the change of the name, by the impropriety of speech, will at first disturb him, who knows not what *idea* it stands for: but as soon as the figure is drawn, the consequences and demonstration are plain and clear. Just the same is it in *moral knowledge*; let a man have the *idea* of taking from others, without their consent, what their honest industry has possessed them of, and call this *justice*, if he please. He that takes the name here without the *idea* put to it, will be mistaken, by joining another *idea* of his own to that name: but strip the *idea* of that name, or take it such as it is in the speaker's mind, and the same things will agree to it, as if you called it *injustice*. Indeed, wrong names in moral discourses breed usually more disorder, because they are not so easily rectified as in mathematicks, where the figure once drawn and seen, makes the name useless and of no force. For what need of a sign, when the thing sig-

Nor will it be less true or certain, because *moral ideas* are of our own making and naming.

nified is present and in view? But, in moral names, that cannot be so easily and shortly done, because of the many decompositions that go to the making up the complex *ideas* of those modes. But yet, for all this, *miscalling* of any of those *ideas*, contrary to the usual signification of the words of that language, hinders not, but that we may have certain and demonstrative knowledge of their several agreements, and disagreements, if we will carefully, as in mathematicks, keep to the same precise *ideas*, and trace them in their several relations one to another, without being led away by their names. If we but separate the *idea* under consideration from the sign that stands for it, our knowledge goes equally on in the discovery of real truth and certainty, whatever sounds we make use of.

Misnaming
disturbs not
the certainty
of the know-
ledge.

§. 10. One thing more we are to take notice of, that where GOD, or any other law-maker, hath defined any moral names, there they have made the essence of that species to which that name belongs; and there it is not safe to apply or use them otherwise: but in other cases it is bare impropriety of speech to apply them contrary to the common usage of the country. But yet even this too disturbs not the certainty of that knowledge, which is still to be had by a due contemplation and comparing of those even nick-named *ideas*.

Ideas of sub-
stances have
their arche-
types without
us.

§. 11. *Thirdly*, There is another sort of *complex ideas*, which, being referred to *archetypes* without us, may differ from them, and so our knowledge about them may come short of being real. Such are our *ideas* of substances, which consisting of a collection of simple *ideas*, supposed taken from the works of nature, may yet vary from them, by having more or different *ideas* united in them, than are to be found united in things themselves: from whence it comes to pass, that they may and often do fail of being exactly conformable to things themselves.

§. 12.

§. 12. I say then, that to have *ideas* of *substances*, which by being conformable to things may afford us *real knowledge*, it is not enough, as in modes, to put together such *ideas* as have no inconsistency, though they did never before so exist: v. g. The *ideas* of *sacrilege* or *perjury*, &c. were as real and true *ideas* before, as after the existence of any such fact. But our *ideas* of *substances*, being supposed copies, and referred to *archetypes* without us, must still be taken from something that does or has existed; they must not consist of *ideas* put together at the pleasure of our thoughts, without any real pattern they were taken from, though we can perceive no inconsistency in such a combination. The reason whereof is, because we not knowing what real constitution it is of substances, whereon our simple *ideas* depend, and which really is the cause of the strict union of some of them one with another, and the exclusion of others; there are very few of them that we can be sure are, or are not, inconsistent in nature, any farther than experience and sensible observation reach. Herein therefore is founded the *reality* of our knowledge concerning *substances*, that all our complex *ideas* of them must be such and such only, as are made up of such simple ones, as have been discovered to co-exist in nature. And our *ideas* being thus true, though not, perhaps, very exact copies, are yet the subjects of *real* (as far as we have any) *knowledge* of them. Which (as has been already shewn) will not be found to reach very far: but so far as it does, it will still be *real knowledge*. Whatever *ideas* we have, the agreement we find they have with others, will still be knowledge. If those *ideas* be abstract, it will be general knowledge. But to make it *real* concerning substances, the *ideas* must be taken from the real existence of things. Whatever simple *ideas* have been found to co-exist in any substance, these we may with confidence join together again; and so make abstract *ideas* of substances. For
 whatever

So far as they agree with those, so far our knowledge concerning them is real.

whatever have once had an union in nature, may be united again.

In our enquiries about substances, we must consider *ideas*, and not confine our thoughts to names, or species supposed set out by names.

§. 13. This if we rightly consider, and *confine not our thoughts* and abstract *ideas* to names, as if there were, or could be no other *sorts* of things, than what known names had already determined, and as it were set out, we should think of things with greater freedom and less confusion, than perhaps we do. It would possibly be thought a bold paradox, if not a very dangerous falshood, if I should say, that some *changelings*, who have lived forty years together without any appearance of reason, are something between a man and a beast: which prejudice is founded upon nothing else but a false supposition, that these two names, *man* and *beast*, stand for distinct species so set out by real essences, that there can come no other species between them: whereas, if we will abstract from those names, and the supposition of such specifick essences made by nature, wherein all things of the same denominations did exactly and equally partake; if we would not fancy that there were a certain number of these essences, wherein all things, as in moulds, were cast and formed, we should find that the *idea* of the shape, motion, and life of a man without reason, is as much a distinct *idea*, and makes as much a distinct *sort* of things from man and beast, as the *idea* of the shape of an *ass* with *reason*, would be different from either that of man or beast, and be a species of an animal between, or distinct from both.

Objection
against a
changeling
being some-
thing between
a man and a
beast, an-
swered.

§. 14. Here every body will be ready to ask, if *changelings* may be supposed something between man and beast; pray what are they? I answer, *changelings*; which is as good a word to signify something different from the signification of *MAN* or *BEAST*, as the names man and beast are to have significations different one from the other.

This,

This, well considered, would resolve this matter, and shew my meaning without any more ado. But I am not so unacquainted with the zeal of some men, which enables them to spin consequences, and to see religion threatened, whenever any one ventures to quit their forms of speaking, as not to foresee what names such a proposition as this is like to be charged with: and without doubt it will be asked, if *changelings* are something between man and beast, what will become of them in the other world? To which I answer, 1. It concerns me not to know or enquire. To their own master they stand or fall. It will make their state neither better nor worse, whether we determine any thing of it or no. They are in the hands of a faithful Creator, and a bountiful Father, who disposes not of his creatures according to our narrow thoughts or opinions, nor distinguishes them according to names and species of our contrivance. And we that know so little of this present world we are in, may, I think, content ourselves without being peremptory in defining the different states which creatures shall come into when they go off this stage. It may suffice us, that he hath made known to all those who are capable of instruction, discourse and reasoning, that they shall come to an account, and receive according to what they have done in this body.

§. 15. But, *Secondly*, I answer, the force of these men's question (*viz.* will you deprive *changelings* of a future state?) is founded on one of these two suppositions, which are both false. The first is, that all things that have the outward shape and appearance of a man, must necessarily be designed to an immortal future being after this life. Or, secondly, that whatever is of human birth must be so. Take away these imaginations, and such questions will be groundless and ridiculous. I desire then those, who think there is no more but an accidental difference between themselves and *changelings*, the essence in both being exactly the same, to consider, whether they can imagine immortality annexed

nexed to any outward shape of the body : the very proposing it is, I suppose, enough to make them disown it. No one yet, that ever I heard of, how much soever immersed in matter, allowed that excellency to any figure of the gross sensible outward parts, as to affirm eternal life due to it, or a necessary consequence of it; or that any mass of matter should, after its dissolution here, be again restored hereafter to an everlasting state of sense, perception, and knowledge, only because it was moulded into this or that figure, and had such a particular frame of its visible parts. Such an opinion as this, placing immortality in a certain superficial figure, turns out of doors all consideration of soul or spirit, upon whose account alone some corporeal beings have hitherto been concluded immortal, and others not. This is to attribute more to the outside than inside of things; to place the excellency of a man more in the external shape of his body, than internal perfections of his soul; which is but little better than to annex the great and inestimable advantage of immortality and life everlasting, which he has above other material beings, to annex it, I say, to the cut of his beard, or the fashion of his coat. For this or that outward make of our bodies no more carries with it the hopes of an eternal duration, than the fashion of a man's suit gives him reasonable grounds to imagine it will never wear out, or that it will make him immortal. It will perhaps be said, that nobody thinks that the shape makes any thing immortal, but it is the shape is the sign of a rational soul within, which is immortal. I wonder who made it the sign of any such thing: for barely saying it, will not make it so. It would require some proofs to persuade one of it. No figure that I know speaks any such language. For it may as rationally be concluded, that the dead body of a man, wherein there is to be found no more appearance or action of life than there is in a statue, has yet nevertheless a living soul in it, because of its shape; as that there is a rational soul in a *changeling*, because

he

he has the outside of a rational creature, when his actions carry far less marks of reason with them, in the whole course of his life, than what are to be found in many a beast.

§. 16. But it is the issue of rational parents, and must therefore be concluded to have a rational soul. I know not by what logick you must so conclude. I am sure this is a conclusion that men no where allow of. For, if they did, they would not make bold, as every where they do, to destroy ill-formed and mis-shaped productions. Ay, but these are *monsters*. Let them be so: what will your drive-ling, unintelligent, intractable *changeling* be? Shall a defect in the body make a monster; a defect in the mind, (the far more noble, and, in the common phrase, the far more essential part) not? Shall the want of a nose, or a neck, make a *monster*, and put such issue out of the rank of men; the want of reason and understanding, not? This is to bring all back again to what was exploded just now: this is to place all in the shape, and to take the measure of a man only by his outside. To shew that, according to the ordinary way of reasoning in this matter, people do lay the whole stress on the figure, and resolve the whole essence of the species of man (as they make it) into the outward shape, how unreasonable soever it be, and how much soever they disown it, we need but trace their thoughts and practice a little farther, and then it will plainly appear. The well-shaped *changeling* is a man, has a rational soul, though it appear not; this is past doubt say you. Make the ears a little longer, and more pointed, and the nose a little flatter than ordinary, and then you begin to boggle: make the face yet narrower, flatter, and longer, and then you are at a stand: add still more and more of the likeness of a brute to it, and let the head be perfectly that of some other animal; then presently it is a *monster*; and it is demonstration with you that it hath no rational soul, and must be destroyed. Where now (I ask) shall be the just measure of the utmost bounds of that shape,
that

that carries with it a rational soul? For, since there have been human *fœtus*'s produced, half beast and half man; and others three parts one, and one part the other; and so it is possible they may be in all the variety of approaches to the one or the other shape, and may have several degrees of mixture of the likeness of a man, or a brute; I would gladly know what are those precise lineaments, which, according to this hypothesis, are, or are not, capable of a rational soul to be joined to them? What sort of outside is the certain sign that there is, or is not, such an inhabitant within? For, till that be done, we talk at random of *man*; and shall always, I fear, do so, as long as we give ourselves up to certain sounds, and the imaginations of settled and fixed species in nature, we know not what. But after all, I desire it may be considered, that those who think they have answered the difficulty, by telling us that a mis-shaped *fœtus* is a *monster*, run into the same fault they are arguing against, by constituting a species between man and beast. For what else, I pray, is their monster in the case, (if the word *monster* signifies any thing at all) but something neither man nor beast, but partaking somewhat of either? And just so is the *changeling* before mentioned. So necessary is it to quit the common notion of species and essences, if we will truly look into the nature of things, and examine them, by what our faculties can discover in them as they exist, and not by groundless fancies that have been taken up about them.

Words and
species.

§. 17. I have mentioned this here, because I think we cannot be too cautious that *words* and *species*, in the ordinary notions which we have been used to of them, impose not upon us. For I am apt to think, therein lies one great obstacle to our clear and distinct knowledge, especially in reference to substances; and from thence has arose a great part of the difficulties about truth and certainty. Would we accustom ourselves to separate our contemplations and reasonings from words, we might,

in

in a great measure, remedy this inconvenience within our own thoughts. But yet it would still disturb us in our discourse with others, as long as we retained the opinion, that *species* and their essences were any thing else but our abstract *ideas* (such as they are) with names annexed to them, to be the signs of them.

§. 18. Wherever we perceive the agree-
ment or disagreement of any of our *ideas*,
there is certain knowledge: and wherever we are sure
those *ideas* agree with the reality of things, there is
certain real knowledge. Of which agreement of our
ideas with the reality of things, having here given the
marks, I think I have shewn wherein it is, that *certainty*,
real certainty, consists. Which, whatever it was to
others, was, I confess, to me heretofore, one of those
desiderata, which I found great want of.

Recapitulation.

CHAP. V.

Of Truth in General.

§. 1. **W**HAT is *truth*, was an enquiry
many ages since; and it being
that which all mankind either do, or pretend to search
after, it cannot but be worth our while carefully to ex-
amine wherein it consists; and so acquaint ourselves
with the nature of it, as to observe how the mind dis-
tinguishes it from falsehood.

What truth is.

§. 2. *Truth* then seems to me, in the
proper import of the word, to signify no-
thing but *the joining or separating of signs*,
as the things signified by them do agree or dis-
agree one with another. The *joining or se-*
parating of signs here meant, is what by another name
we call proposition. So that truth properly belongs
only to propositions; whereof there are two sorts, *viz.*
mental and verbal; as there are two sorts of signs com-
monly made use of, *viz.* *ideas* and words.

A right join-
ing or separ-
ating of signs,
i. e. *ideas* or
words.

§. 3.

Which make
mental or ver-
bal proposi-
tions.

§. 3. To form a clear notion of *truth*, it is very necessary to consider *truth* of thought, and *truth* of words, distinctly one from another: but yet it is very difficult to treat of them asunder; because it is unavoidable, in treating of mental propositions, to make use of words; and then the instances given of *mental propositions* cease immediately to be barely mental, and become *verbal*. For a *mental proposition* being nothing but a bare consideration of the *ideas*, as they are in our minds stripped of names, they lose the nature of purely *mental propositions*, as soon as they are put into words.

Mental pro-
positions are
very hard to
be treated of.

§. 4. And that which makes it yet *harder to treat of mental and verbal propositions separately*, is, That most men, if not all, in their thinking and reasonings within themselves, make use of words instead of *ideas*, at least when the subject of their meditation contains in it complex *ideas*. Which is a great evidence of the imperfection and uncertainty of our *ideas* of that kind, and may, if attentively made use of, serve for a mark to shew us, what are those things we have clear and perfect established *ideas* of, and what not. For, if we will curiously observe the way our mind takes in thinking and reasoning, we shall find, I suppose, that, when we make any propositions within our own thoughts, about *white* or *black*, *sweet* or *bitter*, a *triangle* or a *circle*, we can and often do frame in our minds the *ideas* themselves, without reflecting on the names. But, when we would consider, or make propositions about the more complex *ideas*, as of a *man*, *vitriol*, *fortitude*, *glory*, we usually put the name for the *idea*: because the *ideas* these names stand for, being for the most part imperfect, confused and undetermined, we reflect on the *names* themselves, because they are more clear, certain and distinct, and readier occur to our thoughts than the pure *ideas*; and so we make use of these words instead of the *ideas* themselves, even when we would meditate and reason within ourselves, and make tacit

mental propositions. In *substances*, as has been already noted, this is occasioned by the imperfection of our *ideas*; we making the name stand for the real essence, of which we have no *idea* at all. In *modes*, it is occasioned by the great number of simple *ideas*, that go to the making them up. For many of them being compounded, the name occurs much easier than the complex *idea* itself, which requires time and attention to be recollected, and exactly represented to the mind, even in those men who have formerly been at the pains to do it; and is utterly impossible to be done by those, who, though they have ready in their memory the greatest part of the common words of their language, yet, perhaps, never troubled themselves in all their lives to consider what precise *ideas* the most of them stood for. Some confused or obscure notions have served their turns; and many who talk very much of *religion* and *conscience*, of *church* and *faith*, of *power* and *right*, of *obstructions* and *humours*, *melancholy* and *choler*, would, perhaps, have little left in their thoughts and meditations, if one should desire them to think only of the things themselves, and lay by those words, with which they so often confound others, and not seldom themselves also.

§. 5. But to return to the consideration of truth: we must, I say, observe two sorts of propositions, that we are capable of making.

Being nothing but the joining or separating *ideas* without words.

First, Mental, wherein the ideas in our understandings *are* without the use of words *put together or separated* by the mind, perceiving or judging of their agreement or disagreement.

Secondly, Verbal propositions, which are words, the signs of our ideas, put together or separated in affirmative or negative sentences. By which way of affirming or denying, these signs made by sounds are as it were put together or separated one from another. So that proposition consists in joining or separating signs, and truth consists in the putting together or separating those

signs, according as the things which they stand for agree or disagree.

When mental
propositions
contain real
truth, and
when verbal.

§. 6. Every one's experience will satisfy him, that the mind, either by perceiving or supposing the agreement or disagreement of any of its *ideas*, does tacitly within itself put them into a kind of proposition affirmative or negative, which I have endeavoured to express by the terms *putting together* and *separating*. But this action of the mind, which is so familiar to every thinking and reasoning man, is easier to be conceived by reflecting on what passes in us when we affirm or deny, than to be explained by words. When a man has in his mind the *idea* of two lines, viz. the *side* and *diagonal* of a square, whereof the diagonal is an inch long, he may have the *idea* also of the division of that line into a certain number of equal parts; v. g. into five, ten, an hundred, a thousand, or any other number; and may have the *idea* of that inch line being divisible or not divisible into such equal parts, as a certain number of them will be equal to the side-line. Now, whenever he perceives, believes or supposes such a kind of divisibility to agree or disagree to his *idea* of that line, he, as it were, *joins* or *separates* those two *ideas*, viz. the *idea* of that line, and the *idea* of that kind of divisibility, and so makes a mental proposition, which is true or false, according as such a kind of divisibility, a divisibility into such aliquot parts, does really agree to that line or no. When *ideas* are so put together or separated in the mind, as they, or the things they stand for, do agree or not, that is, as I may call it, *mental truth*. But *truth of words* is something more, and that is the affirming or denying of words one of another, as the *ideas* they stand for agree or disagree: and this again is twofold; either *purely verbal* and trifling, which I shall speak of, Chap. 8. or *real* and instructive; which is the object of that real knowledge, which we have spoken of already.

§. 7. But here again will be apt to occur the same doubt about truth, that did about knowledge: and it will be objected, that if truth be nothing but the joining or separating of words in propositions, as the *ideas* they stand for agree or disagree in men's minds, the knowledge of *truth* is not so valuable a thing, as it is taken to be; nor worth the pains and time men employ to the search of it; since by this account it amounts to no more than the conformity of words to the *chimeras* of men's brains. Who knows not what odd notions many men's heads are filled with, and what strange *ideas* all men's brains are capable of? But if we rest here, we know the truth of nothing by this rule, but of the visionary world in our own imaginations; nor have other truth, but what as much concerns *harpies* and *centaurs*, as men and horses. For those, and the like, may be *ideas* in our heads, and have their agreement and disagreement there, as well as the *ideas* of real beings, and so have as true propositions made about them. And it will be altogether as true a proposition, to say all *centaurs* are animals, as that all men are animals; and the certainty of one as great as the other. For, in both the propositions, the words are put together according to the agreement of the *ideas* in our minds: and the agreement of the *idea* of animal with that of *centaur* is as clear and visible to the mind, as the agreement of the *idea* of animal with that of *man*; and so these two propositions are equally true, equally certain. But of what use is all such truth to us?

Objection
against verbal
truth, that
thus it may all
be chimerical.

§. 8. Though what has been said in the foregoing chapter, to distinguish real from imaginary knowledge, might suffice here, in answer to this doubt, to distinguish *real truth* from *chimerical*, or (if you please) *barely nominal*, they depending both on the same foundation; yet it may not be amiss here again to consider, that though our words signify nothing but our *ideas*,

Answered,
real truth is
about *ideas*
agreeing to
things.

yet being designed by them to signify things, the *truth* they contain, when put into propositions, will be only *verbal*, when they stand for *ideas* in the mind, that have not an agreement with the reality of things. And therefore truth, as well as knowledge, may well come under the distinction of *verbal* and *real*; that being only *verbal truth*, wherein terms are joined according to the agreement or disagreement of the *ideas* they stand for, without regarding whether our *ideas* are such as really have, or are capable of having, an existence in nature. But then it is they contain *real truth*, when these signs are joined, as our *ideas* agree; and when our *ideas* are such as we know are capable of having an existence in nature: which in substances we cannot know, but by knowing that such have existed.

Falshood is the joining of names otherwise than their *ideas* agree.

§. 9. *Truth* is the marking down in words the agreement or disagreement of *ideas*, as it is. *Falshood* is the marking down in words the agreement or disagreement of *ideas* otherwise than it is. And so far as these *ideas*, thus marked by sounds, agree to their archetypes, so far only is the *truth real*. The knowledge of this truth consists in knowing what *ideas* the words stand for, and the perception of the agreement or disagreement of those *ideas*, according as it is marked by those words.

General propositions to be treated of more at large.

§. 10. But, because words are looked on as the great conduits of truth and knowledge, and that in conveying and receiving of truth, and commonly in reasoning about it, we make use of words and propositions, I shall more at large enquire, wherein the certainty of real truths, contained in propositions, consists, and where it is to be had; and endeavour to shew in what sort of universal propositions we are capable of being *certain* of their real truth or falshood.

I shall begin with general propositions, as those which most employ our thoughts, and exercise our contemplation. *General truths* are most looked after

by the mind, as those that most enlarge our knowledge; and by their comprehensiveness, satisfying us at once of many particulars, enlarge our view, and shorten our way to knowledge.

§. 11. Besides truth taken in the strict sense beforementioned, there are other sorts of truth; as, 1. *Moral truth*, which is speaking of things according to the persuasion of our own minds, though the proposition we speak agree not to the reality of things. 2. *Metaphysical truth*, which is nothing but the real existence of things, conformable to the *ideas* to which we have annexed their names. This, though it seems to consist in the very beings of things, yet, when considered a little nearly, will appear to include a tacit proposition, whereby the mind joins that particular thing to the *idea* it had before settled with a name to it. But these considerations of truth, either having been before taken notice of, or not being much to our present purpose, it may suffice here only to have mentioned them.

Moral and metaphysical truth.

CHAP. VI.

Of Universal Propositions, their Truth and Certainty.

§. 1. **T**HOUGH the examining and judging of *ideas* by themselves, their names being quite laid aside, be the best and surest way to clear and distinct knowledge; yet, through the prevailing custom of using sounds for *ideas*, I think it is very seldom practised. Every one may observe how common it is for names to be made use of, instead of the *ideas* themselves, even when men think and reason within their own breasts; especially if the *ideas* be very complex, and made up of a great collection of simple ones. This makes the *consideration of words and propositions* so necessary a part of the *treatise of knowledge*, that it is

Treating of words necessary to knowledge.

very hard to speak intelligibly of the one, without explaining the other.

General truths
hardly to be
understood,
but in verbal
propositions.

§. 2. All the knowledge we have, being only of particular or *general truths*, it is evident, that, whatever may be done in the former of these, the latter, which is that which with reason is most sought after, can never be well made known, and is very *seldom apprehended, but as conceived and expressed in words*. It is not therefore out of our way, in the examination of our knowledge, to enquire into the truth and certainty of universal propositions.

Certainty
two-fold, of
truth and of
knowledge.

§. 3. But that we may not be misled in this case, by that which is the danger every where, I mean by the doubtfulness of terms, it is fit to observe that certainty is two-fold: *certainty of truth*, and *certainty of knowledge*. *Certainty of truth* is, when words are so put together in propositions, as exactly to express the agreement or disagreement of the *ideas* they stand for, as really it is. *Certainty of knowledge* is to perceive the agreement or disagreement of *ideas*, as expressed in any proposition. This we usually call knowing, or being certain of the truth of any proposition.

No propo-
sition can be
known to be
true, where
the essence of
each species
mentioned is
not known.

§. 4. Now, because *we cannot be certain of the truth of any general proposition, unless we know the precise bounds and extent of the species its terms stand for*, it is necessary we should know the essence of each species, which is that which constitutes and bounds it. This, in all simple *ideas* and modes, is not hard to do. For, in these, the real and nominal essence being the same; or, which is all one, the abstract *idea* which the general term stands for, being the sole essence and boundary that is or can be supposed of the species, there can be no doubt, how far the species extends, or what things are comprehended under each term; which, it is evident, are all that have an exact conformity with the *idea* it stands

for, and no other. But in substances, wherein a real essence, distinct from the nominal, is supposed to constitute, determine, and bound the species, the extent of the general word is very uncertain: because, not knowing this real essence, we cannot know what is, or is not of that species, and consequently what may, or may not with certainty be affirmed of it. And thus speaking of a *man* or *gold*, or any other species of natural substances, as supposed constituted by a precise real essence, which nature regularly imparts to every individual of that kind, whereby it is made to be of that species, we cannot be certain of the truth of any affirmation or negation made of it. For *man*, or *gold*, taken in this sense, and used for species of things, constituted by real essences, different from the complex *idea* in the mind of the speaker, stand for we know not what; and the extent of these species, with such boundaries, are so unknown and undetermined, that it is impossible with any certainty to affirm, that all men are rational, or that all gold is yellow. But where the nominal essence is kept to, as the boundary of each species, and men extend the application of any general term no farther than to the particular things, in which the complex *idea* it stands for is to be found, there they are in no danger to mistake the bounds of each *species*, nor can be in doubt, on this account, whether any propositions be true or no. I have chose to explain this uncertainty of propositions in this scholastick way, and have made use of the terms of *essences* and *species*, on purpose to shew the absurdity and inconvenience there is to think of them, as of any other sort of realities, than barely abstract *ideas* with names to them. To suppose, that the species of things are any thing, but the sorting of them under general names, according as they agree to several abstract *ideas*, of which we make those names the signs, is to confound truth, and introduce uncertainty into all general propositions, that can be made about them. Though therefore these things might, to peo-

ple not possessed with scholastick learning, be perhaps treated of in a better and clearer way ; yet those wrong notions of *essences* or *species*, having got root in most people's minds, who have received any tincture from the learning which has prevailed in this part of the world, are to be discovered and removed, to make way for that use of words which should convey certainty with it.

This more particularly concerns substances.

§. 5. *The names of substances then, whenever made to stand for species, which are supposed to be constituted by real essences, which we know not, are not capable to convey certainty to the understanding:* of the truth of general propositions made up of such terms we cannot be sure. The reason whereof is plain. For how can we be sure that this or that quality is in *gold*, when we know not what is or is not *gold*? Since in this way of speaking nothing is *gold*, but what partakes of an essence, which we not knowing, cannot know where it is, or is not, and so cannot be sure, that any parcel of matter in the world is or is not in this sense *gold*; being incurably ignorant, whether it has or has not that which makes any thing to be called *gold*; *i. e.* that real essence of *gold*, whereof we have no *idea* at all: this being as impossible for us to know, as it is for a blind man to tell in what flower the colour of a *pansy* is, or is not to be found, whilst he has no *idea* of the colour of a *pansy* at all. Or, if we could (which is impossible) certainly know where a real essence, which we know not, is; *v. g.* in what parcels of matter the real essence of *gold* is; yet could we not be sure, that this or that quality could with truth be affirmed of *gold*; since it is impossible for us to know, that this or that quality or *idea* has a necessary connexion with a real essence, of which we have no *idea* at all, whatever species that supposed real essence may be imagined to constitute.

§. 6. On the other side, the *names* of *substances*, when made use of, as they should be, for the *ideas* men have in their minds, though they carry a clear and determinate signification with them, will not yet serve us to make many universal propositions, of whose truth we can be certain. Not because in this use of them we are uncertain what things are signified by them, but because the complex *ideas* they stand for are such combinations of simple ones, as carry not with them any discoverable connexion or repugnancy but with a very few other *ideas*.

The truth of few universal propositions concerning substances, is to be known.

§. 7. The complex *ideas*, that our names of the species of substances properly stand for, are collections of such qualities as have been observed to co-exist in an unknown *substratum*, which we call *substance*; but what other qualities necessarily co-exist with such combinations, we cannot certainly know, unless we can discover their natural dependance; which, in their primary qualities, we can go but a very little way in; and in all their secondary qualities, we can discover no connexion at all, for the reasons mentioned *chap. 3. §. 11. &c. viz.* 1. Because we know not the real constitutions of substances, on which each *secondary quality* particularly depends. 2. Did we know that, it would serve us only for experimental (not universal) knowledge; and reach with certainty no farther than that bare instance: because our understandings can discover no conceivable connexion between any *secondary quality*, and any modification whatsoever of any of the *primary* ones. And therefore there are very few general propositions to be made concerning substances, which can carry with them *undoubted certainty*.

Because co-existence of *ideas* in few cases is to be known.

§. 8. *All gold is fixed*, is a proposition whose truth we cannot be certain of, how universally soever it be believed. For if, according to the useless imagination of the schools, any one supposes the term *gold* to stand for a species of things

Instance in gold.

things set out by nature, by a real essence belonging to it, it is evident he knows not what particular substances are of that species; and so cannot, with certainty, affirm any thing universally of *gold*. But if he makes *gold* stand for a species, determined by its nominal essence, let the nominal essence, for example, be the complex *idea* of a *body*, of a certain *yellow* colour, *malleable*, *fusible*, and *heavier* than any other known; in this proper use of the word *gold*, there is no difficulty to know what is, or is not *gold*. But yet no other quality can with certainty be universally affirmed or denied of *gold*, but what hath a discoverable connexion or inconsistency with that nominal essence. *Fixedness*, for example, having no necessary connexion, that we can discover, with the colour, weight, or any other simple *idea* of our complex one, or with the whole combination together; it is impossible that we should certainly know the truth of this proposition, that *all gold is fixed*.

§. 9. As there is no discoverable connexion between *fixedness*, and the colour, weight, and other simple *ideas* of that nominal essence of *gold*; so, if we make our complex *idea* of *gold*, a *body yellow, fusible, ductile, weighty, and fixed*, we shall be at the same uncertainty concerning *solubility* in *aqua regia*; and for the same reason: since we can never, from the consideration of the *ideas* themselves, with certainty affirm or deny, of a *body*, whose complex *idea* is made up of *yellow, very weighty, ductile, fusible, and fixed*, that it is soluble in *aqua regia*; and so on of the rest of its qualities. I would gladly meet with one general affirmation, concerning any quality of *gold*, that any one can certainly know is true. It will, no doubt, be presently objected, is not this an universal certain proposition, *all gold is malleable*? To which I answer, It is a very certain proposition, if *malleableness* be a part of the complex *idea* the word *gold* stands for. But then here is nothing affirmed of *gold*, but that that sound stands for an *idea* in which *malleableness* is contained: and such

such a sort of truth and certainty as this, it is to say, *a centaur is four-footed*. But if *malleableness* makes not a part of the specifick essence the name *gold* stands for, it is plain, *All gold is malleable*, is not a certain proposition: because, let the complex *idea* of *gold* be made up of whichsoever of its other qualities you please, *malleableness* will not appear to depend on that complex *idea*, nor follow from any simple one contained in it; the connexion that *malleableness* has (if it has any) with those other qualities, being only by the intervention of the real constitution of its insensible parts, which since we know not, it is impossible we should perceive that connexion, unless we could discover that which ties them together.

§. 10. The more, indeed, of these co-existing qualities we unite into one complex *idea*, under one name, the more precise and determinate we make the signification of that word: but yet never make it thereby more capable of *universal certainty*, in respect of other qualities not contained in our complex *idea*; since we perceive not their connexion or dependance one on another; being ignorant both of that real constitution in which they are all founded; and also how they flow from it. For the chief part of our knowledge concerning substances is not, as in other things, barely of the relation of two *ideas* that may exist separately; but is of the necessary connexion and co-existence of several distinct *ideas* in the same subject, or of their repugnancy so to co-exist. Could we begin at the other end, and discover what it was, wherein that colour consisted, what made a body lighter or heavier, what texture of parts made it malleable, fusible, and fixed, and fit to be dissolved in this sort of liquor, and not in another; if (I say) we had such an *idea* as this of bodies, and could perceive wherein all sensible qualities originally consist, and how they are produced;

As far as any such co-existence can be known, so far universal propositions may be certain. But this will go but a little way, because,

we

we might frame such abstract *ideas* of them, as would furnish us with matter of more general knowledge, and enable us to make universal propositions, that should carry *general truth* and *certainty* with them. But whilst our complex *ideas* of the sorts of substances are so remote from that internal real constitution, on which their sensible qualities depend, and are made up of nothing but an imperfect collection of those apparent qualities our senses can discover, there can be very few general propositions concerning substances, of whose real truth we can be *certainly* assured; since there are but few simple *ideas*, of whose connexion and necessary co-existence we can have certain and undoubted knowledge. I imagine, amongst all the *secondary qualities* of substances, and the powers relating to them; there cannot any two be named, whose necessary co-existence, or repugnance to co-exist, can certainly be known, unless in those of the same sense, which necessarily exclude one another, as I have elsewhere shewed. No one, I think, by the colour that is in any body, can certainly know what smell, taste, sound, or tangible qualities it has, nor what alterations it is capable to make or receive, on or from other bodies. The same may be said of the sound or taste, &c. Our specifick names of substances standing for any collections of such *ideas*, it is not to be wondered at, that we can, with them, make very few general propositions of *undoubted real certainty*. But yet, so far as any complex *idea*, of any sort of substances, contains in it any simple *idea*, whose necessary co-existence with any other may be discovered, so far *universal propositions* may *with certainty* be made concerning it: *v. g.* could any one discover a necessary connexion between *malleableness*, and the *colour* or *weight* of *gold*, or any other part of the complex *idea* signified by that name, he might make a certain universal proposition concerning *gold* in this respect; and the real truth of this proposition, That *all gold is malleable*, would be

as certain as of this, *The three angles of all right-lined triangles are equal to two right ones.*

§. 11. Had we such *ideas* of substances, as to know what real constitutions produce those sensible qualities we find in them, and how those qualities flowed from thence, we could, by the specifick *ideas* of their real essences in our own minds, more certainly find out their properties, and discover what qualities they had, or had not, than we can now by our senses: and to know the properties of *gold*, it would be no more necessary that *gold* should exist, and that we should make experiments upon it, than it is necessary for the knowing the properties of a triangle, that a triangle should exist in any matter; the *idea* in our minds would serve for the one, as well as the other. But we are so far from being admitted into the secrets of nature, that we scarce so much as ever approach the first entrance towards them. For we are wont to consider the substances we meet with, each of them as an entire thing by itself, having all its qualities in itself, and independent of other things: overlooking, for the most part, the operations of those invisible fluids they are encompassed with; and upon whose motions and operations depend the greatest part of those qualities which are taken notice of in them, and are made by us the inherent marks of distinction, whereby we know and denominate them. Put a piece of *gold* any where by itself, separate from the reach and influence of all other bodies, it will immediately lose all its colour and weight, and perhaps malleableness too: which, for aught I know, would be changed into a perfect friability. *Water*, in which to us *fluidity* is an essential quality, left to itself, would cease to be fluid. But if inanimate bodies owe so much of their present state to other bodies without them, that they would not be what they appear to us, were those bodies that environ them removed, it is yet more so in *vegetables*,

The qualities, which make our complex *ideas* of substances, depend mostly on external, remote, and unperceived causes.

vegetables, which are nourished, grow, and produce leaves, flowers and seeds, in a constant succession. And if we look a little nearer into the state of *animals*, we shall find that their dependance, as to life, motion, and the most considerable qualities to be observed in them, is so wholly on extrinsical causes and qualities of other bodies, that make no part of them, that they cannot subsist a moment without them: though yet those bodies on which they depend are little taken notice of, and make no part of the complex *ideas* we frame of those animals. Take the air but a minute from the greatest part of living creatures, and they presently lose sense, life, and motion. This the necessity of breathing has forced into our knowledge. But how many other extrinsical, and possibly very remote bodies, do the springs of those admirable machines depend on, which are not vulgarly observed, or so much as thought on; and how many are there which the severest enquiry can never discover? The inhabitants of this spot of the universe, though removed so many millions of miles from the sun, yet depend so much on the duly tempered motion of particles coming from, or agitated by it, that were this earth removed but a small part of that distance out of its present situation, and placed a little farther or nearer that source of heat, it is more than probable, that the greatest part of the animals in it would immediately perish; since we find them so often destroyed by an excess or defect of the sun's warmth, which an accidental position, in some parts of this our little globe, exposes them to. The qualities observed in a *loadstone* must needs have their source far beyond the confines of that body; and the ravage made often on several sorts of animals, by invisible causes, the certain death (as we are told) of some of them, by barely passing the Line, or, as it is certain of others, by being removed into a neighbouring country, evidently shew, that the concurrence and operation of several bodies, with which they

they are seldom thought to have any thing to do, is absolutely necessary to make them be what they appear to us, and to preserve those qualities, by which we know and distinguish them. We are then quite out of the way, when we think that things contain within themselves the qualities that appear to us in them: and we in vain search for that constitution within the body of a fly, or an elephant, upon which depend those qualities and powers we observe in them. For which, perhaps, to understand them aright, we ought to look, not only beyond this our earth and atmosphere, but even beyond the sun, or remotest star our eyes have yet discovered. For how much the being and operation of particular substances in this our globe, depend on causes utterly beyond our view, is impossible for us to determine. We see and perceive some of the motions, and grosser operations of things here about us; but whence the streams come that keep all these curious machines in motion and repair, how conveyed and modified, is beyond our notice and apprehension; and the great parts and wheels, as I may so say, of this stupendous structure of the universe, may, for aught we know, have such a connexion and dependence in their influences and operations one upon another, that, perhaps, things in this our mansion would put on quite another face, and cease to be what they are, if some one of the stars, or great bodies incomprehensibly remote from us, should cease to be or move as it does. This is certain, things, however absolute and entire they seem in themselves, are but retainers to other parts of nature, for that which they are most taken notice of by us. Their observable qualities, actions and powers, are owing to something without them: and there is not so complete and perfect a part, that we know of nature, which does not owe the being it has, and the excellencies of it, to its neighbours; and we must not confine our thoughts within the surface of any body, but look a
great

great deal farther, to comprehend perfectly those qualities that are in it.

§. 12. If this be so, it is not to be wondered, that *we have very imperfect ideas of substances*; and that the real essences, on which depend their properties and operations, are unknown to us. We cannot discover so much as that *size, figure, and texture*, of their minute and active parts, which is really in them; much less the different motions and impulses made in and upon them by bodies from without, upon which depends, and by which is formed, the greatest and most remarkable part of those qualities we observe in them, and of which our complex *ideas* of them are made up. This consideration alone is enough to put an end to all our hopes of ever having the *ideas* of their real essences; which whilst we want, the nominal essences, we make use of instead of them, will be able to furnish us but very sparingly with any *general knowledge*, or universal propositions capable of real *certainty*.

Judgment may reach farther, but that is not knowledge.

§. 13. We are not therefore to wonder, if *certainty* be to be found in very few general propositions made concerning substances: our knowledge of their qualities and properties goes very seldom farther than our senses reach and inform us. Possibly inquisitive and observing men may, by strength of *judgment*, penetrate farther, and on probabilities taken from wary observation, and hints well laid together, often guess right at what experience has not yet discovered to them. But this is but guessing still; it amounts only to opinion, and has not that *certainty* which is requisite to knowledge. For all *general knowledge* lies only in our own thoughts, and consists barely in the contemplation of our own abstract *ideas*. Wherever we perceive any agreement or disagreement amongst them, there we have *general knowledge*; and by putting the names of those *ideas* together accordingly in propositions, can with *certainty* pronounce *general truths*. But because the abstract *ideas* of substances, for which their
specifick

specifick names stand, whenever they have any distinct and determinate signification, have a discoverable connexion or inconsistency with but a very few other *ideas*, the *certainty of universal propositions concerning substances* is very narrow and scanty in that part, which is our principal enquiry concerning them; and there is scarce any of the names of substances, let the *idea* it is applied to be what it will, of which we can generally, and with certainty pronounce, that it has or has not this or that other quality belonging to it, and constantly co-existing or inconsistent with that *idea*, wherever it is to be found.

§. 14. Before we can have any tolerable knowledge of this kind, we must first know what changes the *primary qualities* of one body do regularly produce in the *primary qualities* of another, and how. *Secondly*, We must know what *primary qualities* of any body produce certain sensations or *ideas* in us. This is, in truth, no less than to know all the effects of matter, under its divers modifications, of bulk, figure, cohesion of parts, motion and rest. Which, I think, every body will allow, is utterly impossible to be known by us, without revelation. Nor, if it were revealed to us, what sort of figure, bulk and motion of corpuscles, would produce in us the sensation of a *yellow* colour, and what sort of figure, bulk and texture of parts in the superficies of any body, were fit to give such corpuscles their due motion to produce that colour, would that be enough to make *universal propositions with certainty*, concerning the several sorts of them, unless we had faculties acute enough to perceive the precise bulk, figure, texture and motion of bodies in those minute parts, by which they operate on our senses, that so we might by those frame our abstract *ideas* of them. I have mentioned here only *corporeal* substances, whose operations seem to lie more level to our understandings: for, as to the *operations of spirits*, both their thinking and moving of bodies,

What is requisite for our knowledge of substances.

we at first sight find ourselves at a loss; though perhaps, when we have applied our thoughts a little nearer to the consideration of bodies, and their operations, and examined how far our notions, even in these, reach, with any clearness, beyond sensible matter of fact, we shall be bound to confess, that even in these too, our discoveries amount to very little beyond perfect ignorance and incapacity.

Whilst our *ideas* of substances contain not their real constitutions, we can make but few general certain propositions concerning them.

§. 15. This is evident, *the abstract complex ideas of substances*, for which their general names stand, not comprehending their real constitutions, *can afford us but very little universal certainty*: Because our *ideas* of them are not made up of that, on which those qualities we observe in them, and would inform ourselves about, do depend, or with which they have any certain connexion. *V. g.* Let the *idea* to which we give the name *man*, be, as it commonly is, a body of the ordinary shape, with sense, voluntary motion and reason joined to it. This being the abstract *idea*, and consequently the essence of our species *man*, we can make but very few general certain propositions concerning *man*, standing for such an *idea*: because, not knowing the real constitution on which sensation, power of motion and reasoning, with that peculiar shape, depend, and whereby they are united together in the same subject, there are very few other qualities, with which we can perceive them to have a necessary connexion; and therefore we cannot with certainty affirm, that *all men sleep by intervals*; that *no man can be nourished by wood or stones*; that *all men will be poisoned by bentlock*: because these *ideas* have no connexion nor repugnancy with this our nominal essence of *man*, with this abstract *idea* that name stands for. We must in these and the like appeal to trial in particular subjects, which can reach but a little way. We must content ourselves with probability in the rest; but can have no general certainty, whilst our specifick *idea* of
man

man contains not that real constitution, which is the root wherein all his inseparable qualities are united, and from whence they flow. Whilst our *idea* the word *man* stands for, is only an imperfect collection of some sensible qualities and powers in him, there is no discernible connexion or repugnance between our specifick *idea*, and the operation of either the parts of *hemlock* or *stones* upon his constitution. There are animals that safely eat *hemlock*, and others that are nourished by wood and *stones*: but, as long as we want *ideas* of those real constitutions of different sorts of animals, whereon these and the like qualities and powers depend, we must not hope to reach *certainty* in universal propositions concerning them. Those few *ideas* only, which have a discernible connexion with our nominal essence, or any part of it, can afford us such propositions. But these are so few, and of so little moment, that we may justly look on our certain *general knowledge of substances*, as almost none at all.

§. 16. To conclude, *general propositions*, of what kind soever, are then only capable of *certainty*, when the terms used in them stand for such *ideas*, whose agreement or disagreement, as there expressed, is capable to be discovered by us. And we are then certain of their truth or falshood, when we perceive the *ideas* the terms stand for, to agree, or not agree, according as they are affirmed or denied one of another. Whence we may take notice, that *general certainty* is never to be found but in our *ideas*. Whenever we go to seek it elsewhere in experiment or observations without us, our knowledge goes not beyond particulars. It is the contemplation of our own abstract *ideas*, that alone is able to afford us *general knowledge*.

Wherein lies the general certainty of propositions.

C H A P. VII.

Of Maxims.

They are
self-evident.

§. 1. **T**HERE are a sort of propositions, which, under the name of *maxims* and *axioms*, have passed for principles of science; and, because they are *self-evident*, have been supposed innate, although nobody (that I know) ever went about to shew the reason and foundation of their clearness or cogency. It may however be worth while to enquire into the reason of their evidence, and see whether it be peculiar to them alone, and also examine how far they influence and govern our other knowledge.

Wherein that
self-evidence
consists.

§. 2. *Knowledge*, as has been shewn, consists in the perception of the agreement or disagreement of *ideas*: now, where that agreement or disagreement is perceived immediately by itself, without the intervention or help of any other, there our *knowledge is self-evident*. This will appear to be so to any one, who will but consider any of those propositions, which, without any proof, he assents to at first sight; for in all of them he will find, that the reason of his assent is from that agreement or disagreement, which the mind, by an immediate comparing them, finds in those *ideas* answering the affirmation or negation in the proposition.

Self-evidence
not peculiar
to received
axioms.

§. 3. This being so, in the next place let us consider, whether this *self-evidence* be peculiar only to those propositions which commonly pass under the name of maxims, and have the dignity of axioms allowed them. And here it is plain, that several other truths, not allowed to be axioms, partake equally with them in this *self-evidence*. This we shall see, if we go over these several sorts of agreement or disagreement of *ideas*, which

I have

I have above-mentioned, *viz.* identity, relation, co-existence, and real existence; which will discover to us, that not only those few propositions, which have had the credit of *maxims*, are self-evident, but a great many, even almost an infinite number of *other propositions* are such.

§. 4. For, *First*, The immediate perception of the agreement or disagreement of identity being founded in the mind's having distinct *ideas*, this affords us as many *self-evident* propositions, as we have distinct *ideas*. Every one that has any knowledge at all, has, as the foundation of it, various and distinct *ideas*: and it is the first act of the mind (without which it can never be capable of any knowledge) to know every one of its *ideas* by itself, and distinguish it from others. Every one finds in himself, that he knows the *ideas* he has; that he knows also, when any one is in his understanding, and what it is; and that, when more than one are there, he knows them distinctly and unconfusedly one from another. Which always being so, (it being impossible but that he should perceive what he perceives) he can never be in doubt, when any *idea* is in his mind, that it is there, and is that *idea* it is: and that two distinct *ideas*, when they are in his mind, are there, and are not one and the same *idea*. So that all such affirmations and negations are made without any possibility of doubt, uncertainty or hesitation, and must necessarily be assented to as soon as understood; that is, as soon as we have in our minds determined *ideas*, which the terms in the proposition stand for. And therefore, wherever the mind with attention considers any proposition, so as to perceive the two *ideas* signified by the terms, and affirmed or denied one of the other, to be the same or different, it is presently and infallibly certain of the truth of such a proposition, and this equally, whether these propositions be in terms standing for more general *ideas*, or such as are less so, *v. g.* whether the general

First, As to identity and diversity, all propositions are equally self-evident.

ral *idea* of *being* be affirmed of itself, as in this proposition, *Whatsoever is, is*; or a more particular *idea* be affirmed of itself, as *a man is a man*, or *whatsoever is white, is white*. Or whether the *idea* of *being* in general be denied of *not being*, which is the only (if I may so call it) *idea* different from it, as in this other proposition, *it is impossible for the same thing to be, and not to be*; or any *idea* of any particular being be denied of another different from it, as *a man is not a horse*; *red is not blue*. The difference of the *ideas* as soon as the terms are understood, makes the truth of the proposition presently visible, and that with an equal certainty and easiness in the less as well as the more general propositions, and all for the same reason, *viz.* because the mind perceives, in any *ideas* that it has, the same *idea* to be the same with itself; and two different *ideas* to be different, and not the same. And this it is equally certain of, whether these *ideas* be more or less general, abstract, and comprehensive. It is not therefore alone to these two general propositions, *whatsoever is, is*: and *it is impossible for the same thing to be, and not to be*; that this self-evidence belongs by any peculiar right. The perception of being, or not being, belongs no more to these vague *ideas*, signified by the terms *whatsoever* and *thing*, than it does to any other *ideas*. These two general maxims amounting to no more, in short, but this, that *the same is the same*, and *same is not different*, are truths known in more particular instances, as well as in these general maxims, and known also in particular instances, before these general maxims are ever thought on, and draw all their force from the discernment of the mind employed about particular *ideas*. There is nothing more visible, than that the mind, without the help of any proof or reflection on either of these general propositions, perceives so clearly, and knows so certainly, that the *idea* of white is the *idea* of white, and not the *idea* of blue; and that the *idea* of white, when it is in the mind, is there, and is not absent, that the consideration of these

axioms

axioms can add nothing to the evidence or certainty of its knowledge. Just so it is (as every one may experiment in himself) in all the *ideas* a man has in his mind: he knows each to be itself, and not to be another; and to be in his mind, and not away, when it is there, with a certainty that cannot be greater; and therefore the truth of no general proposition can be known with a greater certainty, nor add any thing to this. So that, in respect of identity, our intuitive knowledge reaches as far as our *ideas*: and we are capable of making as many self-evident propositions as we have names for distinct *ideas*. And I appeal to every one's own mind, whether this proposition, *a circle is a circle*, be not as self-evident a proposition, as that consisting of more general terms, *whatsoever is, is*: and again, whether this proposition, *blue is not red*, be not a proposition that the mind can no more doubt of, as soon as it understands the words, than it does of that axiom, *it is impossible for the same thing to be, and not to be*; and so of all the like.

§. 5. *Secondly*, As to *co-existence*, or such necessary connexion between two *ideas*, that, in the subject where one of them is supposed, there the other must necessarily be also; of such agreement or disagreement as this the mind has an immediate perception but in very few of them; and therefore in this sort we have but very little intuitive knowledge. Nor are there to be found very many propositions that are self-evident, though some there are; *v. g.* the *idea* of filling a place equal to the contents of its superficies, being annexed to our *idea* of body, I think it is a self-evident proposition, *that two bodies cannot be in the same place*.

Secondly, in co-existence we have few self-evident propositions.

§. 6. *Thirdly*, As to the *relations* of modes, mathematicians have framed many axioms concerning that one relation of equality. As *equals taken from equals, the remainder will be equals*; which, with the rest of that kind, however they are received for maxims by the mathema-

Thirdly, in other relations we may have.

ticians, and are unquestionable truths; yet, I think that any one who considers them will not find that they have a clearer self-evidence than these, that *one and one are equal to two*; that *if you take from the five fingers of one hand two, and from the five fingers of the other hand two, the remaining numbers will be equal*. These, and a thousand other such propositions, may be found in numbers, which, at the very first hearing, force the assent, and carry with them an equal, if not greater clearness, than those mathematical axioms.

Fourthly, concerning real existence, we have none.

§. 7. *Fourthly*, As to *real existence*, since that has no connexion with any other of our *ideas*, but that of ourselves, and of a first being, we have in that, concerning the real existence of all other beings, not so much as demonstrative, much less a self-evident knowledge; and therefore concerning those there are no maxims.

These axioms do not much influence our other knowledge.

§. 8. In the next place let us consider, what *influence* these received maxims have upon the other parts of our knowledge. The rules established in the schools, that all reasonings are *ex præcognitis & præconcessis*, seem to lay the foundation of all other knowledge in these maxims, and to suppose them to be *præcognita*; whereby, I think, are meant these two things; first, that these axioms are those truths that are first known to the mind. And, secondly, that upon them the other parts of our knowledge depend.

Because they are not the truths we first knew.

§. 9. *First*, That they are not the *truths first known* to the mind, is evident to experience, as we have shewn in another place, *b. I. ch. II.* Who perceives not, that a child certainly knows that a stranger is not its mother; that its sucking-bottle is not the rod, long before he knows, that *it is impossible for the same thing, to be, and not to be*? And how many truths are there about numbers, which it is obvious to observe, that the mind is perfectly acquainted with, and fully convinced of, before it ever thought on these general maxims,

maxims, to which mathematicians, in their arguings, do sometimes refer them? Whereof the reason is very plain: for that which makes the mind assent to such propositions, being nothing else but the perception it has of the agreement or disagreement of its *ideas*, according as it finds them affirmed or denied one of another, in words it understands, and every *idea* being known to be what it is, and every two distinct *ideas* being known not to be the same, it must necessarily follow, that such self-evident truths must be *first* known, which consists of *ideas* that are *first* in the mind; and the *ideas first* in the mind, it is evident, are those of particular things, from whence, by slow degrees, the understanding proceeds to some few general ones; which being taken from the ordinary and familiar objects of sense, are settled in the mind, with general names to them. Thus particular *ideas* are *first* received and distinguished, and so knowledge got about them; and next to them the less general or specifick, which are next to particular: for abstract *ideas* are not so obvious or easy to children, or the yet unexercised mind, as particular ones. If they seem so to grown men, it is only because by constant and familiar use they are made so: for, when we nicely reflect upon them, we shall find, that general *ideas* are fictions and contrivances of the mind, that carry difficulty with them, and do not so easily offer themselves as we are apt to imagine. For example, does it not require some pains and skill to form the general *idea* of a *triangle*? (which is yet none of the most abstract, comprehensive, and difficult) for it must be neither oblique, nor rectangle, neither equilateral, equicrural, nor scalenon; but all and none of these at once. In effect, it is something imperfect, that cannot exist; an *idea* wherein some parts of several different and inconsistent *ideas* are put together. It is true, the mind, in this imperfect state, has need of such *ideas*, and makes all the haste to them it can, for the conveniency of communication and enlargement of knowledge; to both which
it

it is naturally very much inclined. But yet one has reason to suspect such *ideas* are marks of our imperfection; at least this is enough to shew, that the most abstract and general *ideas* are not those that the mind is *first* and most easily acquainted with, nor such as its earliest knowledge is conversant about.

Because on
them the other
parts of our
knowledge do
not depend.

§. 10. *Secondly*, From what has been said, it plainly follows, that these magnified *maxims* are not the principles and *foundations* of all our other *knowledge*. For, if there be a great many other truths which have as much self-evidence as they, and a great many that we know before them, it is impossible they should be the *principles* from which we deduce all other truths. Is it impossible to know that *one* and *two* are equal to *three*, but by virtue of this, or some such axiom, *viz.* *The whole is equal to all its parts taken together*? Many a one knows, that *one* and *two* are equal to *three*, without having heard, or thought on that, or any other axiom, by which it might be proved; and knows it as certainly, as any other man knows that the *whole is equal to all its parts*, or any other maxim, and all from the same reason of self-evidence; the equality of those *ideas* being as visible and certain to him without that, or any other axiom, as with it, it needing no proof to make it perceived. Nor, after the knowledge, *that the whole is equal to all its parts*, does he know that *one and two are equal to three*, better or more certainly than he did before. For, if there be any odds in those *ideas*, the *whole* and *parts* are more obscure, or at least more difficult to be settled in the mind, than those of *one, two, and three*. And indeed, I think, I may ask these men, who will needs have all knowledge, besides those general principles themselves, to *depend* on general, innate, and self-evident principles, what principle is requisite to prove, that *one* and *one* are *two*, that *two* and *two* are *four*, that *three* times *two* are *six*? Which being known without any proof, do evince, that either all knowledge does not *depend* on certain

præcognita, or general maxims, called principles, or else that these are principles; and if these are to be counted principles, a great part of numeration will be so. To which if we add all the self-evident propositions which may be made about all our distinct *ideas*, principles will be almost infinite, at least innumerable, which men arrive to the knowledge of at different ages; and a great many of these innate principles they never come to know all their lives. But, whether they come in view of the mind earlier or later, this is true of them, that they are all known by their native evidence, are wholly independent, receive no light, nor are capable of any proof one from another; much less the more particular from the more general; or the more simple from the more compounded; the more simple, and less abstract, being the most familiar, and the easier and earlier apprehended. But, whichever be the clearest *ideas*, the evidence and *certainty* of all such propositions is in this, that a man sees the same *idea* to be the same *idea*, and infallibly perceives two different *ideas* to be different *ideas*. For, when a man has in his understanding the *ideas* of *one* and of *two*, the *idea* of *yellow*, and the *idea* of *blue*, he cannot but certainly know, that the *idea* of *one* is the *idea* of *one*, and not the *idea* of *two*; and that the *idea* of *yellow* is the *idea* of *yellow*, and not the *idea* of *blue*. For a man cannot confound the *ideas* in his mind, which he has distinct: that would be to have them confused and distinct at the same time, which is a contradiction: and to have none distinct, is to have no use of our faculties, to have no knowledge at all. And therefore, what *idea* soever is affirmed of itself, or whatsoever two entire distinct *ideas* are denied one of another, the mind cannot but assent to such a proposition, as infallibly true, as soon as it understands the terms, without hesitation or need of proof, or regarding those made in more general terms, and called maxims.

What use
these general
maxims have.

§. 11. What shall we then say? Are these *general maxims* of no use? By no means; though perhaps their use is not that which it is commonly taken to be. But since doubting in the least of what hath been by some men ascribed to these *maxims*, may be apt to be cried out against, as overturning the foundations of all the sciences, it may be worth while to consider them with respect to other parts of our knowledge, and examine more particularly to what purposes they serve, and to what not.

1. It is evident from what has been already said, that they are of no use to prove or confirm less general self-evident propositions.

2. It is as plain that they are not, nor have been, the foundations whereon any science hath been built. There is I know a great deal of talk, propagated from scholastick men, of sciences, and the *maxims* on which they are built: but it has been my ill luck never to meet with any such sciences: much less any one built upon these two *maxims*, *What is, is*; and *it is impossible for the same thing to be, and not to be*. And I would be glad to be shewn where any such science erected upon these, or any other general *axioms*, is to be found; and should be obliged to any one who would lay before me the frame and system of any science so built on these, or any such like *maxims*, that could not be shewn to stand as firm without any consideration of them. I ask, whether these general *maxims* have not the same use in the study of divinity, and in theological questions, that they have in the other sciences? They serve here too to silence wranglers, and put an end to dispute. But I think that nobody will therefore say, that the *Christian* religion is built upon these *maxims*, or that the knowledge we have of it is derived from these *principles*. It is from revelation we have received it, and without revelation these *maxims* had never been able to help us to it. When we find out an *idea*, by whose intervention we discover the

connexion of two others, this is a revelation from God to us by the voice of reason. For we then come to know a truth that we did not know before. When God declares any truth to us, this is a revelation to us by the voice of his spirit, and we are advanced in our knowledge. But in neither of these do we receive our light or knowledge from *maxims*. But in the one the things themselves afford it, and we see the truth in them by perceiving their agreement or disagreement: in the other, God himself affords it immediately to us, and we see the truth of what he says in his unerring veracity.

3. They are not of use to help men forward in the advancement of sciences, or new discoveries of yet unknown truths. Mr. *Newton*, in his never enough to be admired book, has demonstrated several propositions, which are so many new truths, before unknown to the world, and are farther advances in mathematical knowledge: but for the discovery of these, it was not the general *maxims*, *What is, is*; or *the whole is bigger than a part*, or the like, that helped him. These were not the clues that led him into the discovery of the truth and certainty of those propositions. Nor was it by them that he got the knowledge of those demonstrations; but by finding out intermediate *ideas*, that shewed the agreement or disagreement of the *ideas*, as expressed in the propositions he demonstrated. This is the great exercise and improvement of Human Understanding in the enlarging of knowledge, and advancing the sciences; wherein they are far enough from receiving any help from the contemplation of these, or the like magnified *maxims*. Would those, who have this traditional admiration of these propositions, that they think no step can be made in knowledge without the support of an *axiom*, no stone laid in the building of the sciences without a general *maxim*, but distinguish between the method of acquiring knowledge, and of communicating; between the method of raising any science, and that of teaching it to others as far as it is advanced;

advanced; they would see that those general *maxims* were not the foundations on which the first discoverers raised their admirable structures, nor the keys that unlocked and opened those secrets of knowledge. Though afterwards, when schools were erected, and sciences had their professors to teach what others had found out, they often made use of *maxims*, *i. e.* laid down certain propositions which were self-evident, or to be received for true; which being settled in the minds of their scholars, as unquestionable verities, they on occasion made use of, to convince them of truths in particular instances, that were not so familiar to their minds as those general *axioms* which had before been inculcated to them, and carefully settled in their minds. Though these particular instances, when well reflected on, are no less self-evident to the understanding, than the general *maxims* brought to confirm them: and it was in those particular instances, that the first discoverer found the truth, without the help of the general *maxims*: and so may any one else do, who with attention considers them.

To come therefore to the use that is made of *maxims*.

1. They are of use, as has been observed, in the ordinary methods of teaching sciences as far as they are advanced; but of little or none in advancing them farther.

2. They are of use in disputes, for the silencing of obstinate wranglers, and bringing those contests to some conclusion. Whether a need of them to that end came not in the manner following, I crave leave to enquire. The schools having made disputation the touchstone of men's abilities, and the *criterion* of knowledge, adjudged victory to him that kept the field, and he that had the last word was concluded to have the better of the argument, if not of the cause. But, because by this means there was like to be no decision between skilful combatants, whilst one never failed of a *medius terminus* to prove any proposition, and the other could as constantly, without, or with a distinction, deny the

major

major or *minor*; to prevent, as much as could be, the running out of disputes into an endless train of syllogisms, certain general propositions, most of them indeed, self-evident, were introduced into the schools; which being such as all men allowed and agreed in, were looked on as general measures of truth, and served instead of principles (where the disputants had not laid down any other between them) beyond which there was no going, and which must not be receded from by either side. And thus these *maxims* getting the name of *principles*, beyond which men in dispute could not retreat, were by mistake taken to be the originals and sources from whence all knowledge began, and the foundations whereon the sciences were built; because, when in their disputes they came to any of these, they stopped there, and went no further, the matter was determined. But how much this is a mistake, hath been already shewn.

This method of the schools which have been thought the fountains of knowledge, introduced, as I suppose, the like use of these maxims into a great part of conversation out of the schools, to stop the mouths of cavillers, whom any one is excused from arguing any longer with, when they deny these general self-evident principles received by all reasonable men, who have once thought of them; but yet their use herein is but to put an end to wrangling. They in truth, when urged in such cases, teach nothing: that is already done by the intermediate *ideas* made use of in the debate, whose connexion may be seen without the help of those maxims, and so the truth known before the maxim is produced, and the argument brought to a first principle. Men would give off a wrong argument before it came to that, if in their disputes they proposed to themselves the finding and embracing of truth, and not a contest for victory. And thus maxims have their use to put a stop to their perverseness, whose ingenuity should have yielded sooner. But the method of the schools having allowed and encouraged

raged men to oppose and resist evident truth, till they are baffled, *i. e.* till they are reduced to contradict themselves, or some established principle; it is no wonder that they should not, in civil conversation, be ashamed of that which in the schools is counted a virtue and a glory, *viz.* obstinately to maintain that side of the question they have chosen, whether true or false, to the last extremity, even after conviction. A strange way to attain truth and knowledge; and that which I think the rational part of mankind, not corrupted by education, could scarce believe should ever be admitted amongst the lovers of truth, and students of religion or nature; or introduced into the seminaries of those who are to propagate the truths of religion or philosophy amongst the ignorant and unconvinced. How much such a way of learning is like to turn young men's minds from the sincere search and love of truth, nay, and to make them doubt whether there is any such thing, or at least worth the adhering to, I shall not now enquire. This I think, that bating those places which brought the *peripatetick* philosophy into their schools, where it continued many ages without teaching the world any thing but the art of wrangling, these maxims were no where thought the foundations on which the sciences were built, nor the great helps to the advancement of knowledge.

What use
these general
maxims have.

As to these *general maxims* therefore, they are, as I have said, of great use in disputes, to stop the mouths of wranglers; but not of much use to the discovery of unknown truths, or to help the mind forwards in its search after knowledge. For who ever began to build this knowledge on this general proposition, *What is, is; or it is impossible for the same thing to be, and not to be;* and from either of these, as from a principle of science, deduced a system of useful knowledge? Wrong opinions often involving contradictions, one of these maxims, as a touchstone, may serve well to shew whither they lead.

But

But yet, however fit to lay open the absurdity or mistake of a man's reasoning or opinion, they are of very little *use* for enlightening the understanding; and it will not be found, that the mind receives much help from them in its progress in knowledge; which would be neither less, nor less certain, were these two *general propositions* never thought on. It is true, as I have said, they sometimes *serve* in argumentation to stop a wrangler's mouth, by shewing the absurdity of what he saith, and by exposing him to the shame of contradicting what all the world knows, and he himself cannot but own to be true. But it is one thing to shew a man that he is in an error, and another to put him in possession of truth; and I would fain know what truths these two propositions are able to teach, and by their influence make us know, which we did not know before, or could not know without them. Let us reason from them as well as we can, they are only about identical predications, and *influence*; if any at all, none but such. Each particular proposition concerning identity or diversity, is as clearly and certainly known in itself, if attended to, as either of these general ones; only these general ones, as serving in all cases, are therefore more inculcated and insisted on. As to other less general maxims, many of them are no more than bare verbal propositions, and teach us nothing but the respect and import of names one to another. *The whole is equal to all its parts*: what real truth, I beseech you, does it teach us? What more is contained in that maxim, than what the signification of the word *totum*, or the *whole*, does of itself import? And he that knows that the word *whole* stands for what is made up of all its parts, knows very little less, than that the *whole* is equal to all its *parts*. And upon the same ground, I think that this proposition, *A hill is higher than a valley*, and several the like, may also pass for maxims. But yet masters of *mathematicks*, when they would, as teachers of what they know, initiate others

in that science, do not without reason place this, and some other such maxims, at the entrance of their *systems*, that their scholars, having in the beginning perfectly acquainted their thoughts with these propositions made in such general terms, may be used to make such reflections, and have these more general propositions, as formed rules and sayings, ready to apply to all particular cases. Not that if they be equally weighed, they are more clear and evident than the particular instances they are brought to confirm: but that being more familiar to the mind, the very naming them is enough to satisfy the understanding. But this, I say, is more from our custom of using them, and the establishment they have got in our minds, by our often thinking of them, than from the different evidence of the things. But before custom has settled methods of thinking and reasoning in our minds, I am apt to imagine it is quite otherwise; and that the child, when a part of his apple is taken away, knows it better in that particular instance, than by this general proposition, *the whole is equal to all its parts*; and that if one of these have need to be confirmed to him by the other, the general has more need to be let into his mind by the particular, than the particular by the general. For in particulars, our knowledge begins, and so spreads itself by degrees, to generals; though afterwards the mind takes the quite contrary course, and, having drawn its knowledge into as general propositions as it can, makes those familiar to its thoughts, and accustoms itself to have recourse to them, as to the standards of truth and falsehood. By which familiar *use of them*, as rules to measure the truth of other propositions, it comes in time to be thought, that more particular propositions have their truth and evidence from their conformity to these more general ones, which, in discourse and argumentation, are so frequently urged, and constantly admitted. And this I think to be the reason why, among so many self-evident propositions,

tions, the most general only have had the title of maxims.

§. 12. One thing farther, I think, it may not be amiss to observe concerning these general maxims, that they are so far from improving or establishing our minds in true knowledge, that if our notions be wrong, loose, or unsteady, and we resign up our thoughts to the sound of words, rather than fix them on settled determined *ideas* of things; I say these *general maxims* will *serve* to confirm us in mistakes; and in such a way of use of words which is most common, will *serve* to prove contradictions; v. g. He that with *Des Cartes* shall frame in his mind an *idea* of what he calls *body*, to be nothing but extension, may easily demonstrate, that there is no *vacuum*, i. e. no space void of body, by this maxim, *what is, is*: for the *idea* to which he annexes the name *body*, being bare extension, his knowledge that space cannot be without body is certain: for he knows his own *idea* of extension clearly and distinctly, and knows that it is *what it is*, and not another *idea*, though it be called by these three names, *extension*, *body*, *space*. Which three words standing for one and the same *idea*, may, no doubt, with the same evidence and certainty, be affirmed one of another, as each of itself: and it is as certain, that whilst I use them all to stand for one and the same *idea*, this predication is as true and identical in its signification, *that space is body*, as this predication is true and identical, *that body is body*, both in signification and sound.

Maxims, if care be not taken in the use of words, may prove contradictions.

§. 13. But if another shall come and make to himself another *idea*, different from *Des Cartes's*, of the thing, which yet with *Des Cartes* he calls by the same name *body*, and make his *idea*, which he expresses by the word *body*, to be of a thing that hath both *extension* and *solidity* together, he will as easily demonstrate, that there may be a *vacuum*, or space without a body, as *Des Cartes*

Instance in *vacuum*.

demonstrated the contrary: because the *idea*, to which he gives the name *space*, being barely the simple one of *extension*; and the *idea*, to which he gives the name *body*, being the complex *idea* of *extension* and *resistibility*, or *solidity*, together in the same subject, these two *ideas* are not exactly one and the same, but in the understanding as distinct as the *ideas* of one and two, white and black, or as of *corporeity* and *humanity*, if I may use those barbarous terms: and therefore the predication of them in our minds, or in words standing for them, is not identical, but the negation of them one of another; *viz.* this proposition, *extension, or space, is not body*, is as true and evidently certain, as this maxim, *it is impossible for the same thing to be, and not to be*, can make any proposition.

They prove
not the exist-
ence of things
without us.

§. 14. But yet, though both these propositions (as you see) may be equally demonstrated, *viz.* that there may be a *vacuum*, and that there cannot be a *vacuum*, by these two certain principles, (*viz.*) *What is, is*, and *the same thing cannot be, and not be*; yet neither of these principles will serve to prove to us, that any, or what bodies do exist: for that we are left to our senses, to discover to us as far as they can. Those universal and self-evident principles, being only our constant, clear, and distinct knowledge of our own *ideas*, more general or comprehensive, can assure us of nothing that passes without the mind; their certainty is founded only upon the knowledge we have of each *idea* by itself, and of its distinction from others; about which we cannot be mistaken whilst they are in our minds, though we may, and often are mistaken, when we retain the names without the *ideas*, or use them confusedly, sometimes for one, and sometimes for another *idea*. In which cases, the force of these *axioms*, reaching only to the sound, and not the signification of the words, *serves* only to lead us into confusion, mistake, and error. It is to shew men, that these maxims, however cried up for the great guards of truth, will not
secure

secure them from error in a careless loose use of their words, that I have made this remark. In all that is here suggested concerning their little use for the improvement of knowledge, or dangerous use in undetermined *ideas*, I have been far enough from saying or intending they should be *laid aside*, as some have been too forward to charge me. I affirm them to be truths, self-evident truths; and so cannot be *laid aside*. As far as their influence will reach, it is in vain to endeavour, nor would I attempt to abridge it. But yet, without any injury to truth or knowledge, I may have reason to think their use is not answerable to the great stress which seems to be laid on them, and I may warn men not to make an ill use of them for the confirming themselves in error.

§. 15. But, let them be of what *use* they will in verbal propositions, they cannot discover or prove to us the least knowledge of the nature of substances, as they are found and exist without us, any farther than grounded on experience. And though the consequence of these two propositions, called principles, be very clear, and their *use* not dangerous or hurtful, in the probation of such things, wherein there is no need at all of them for proof, but such as are clear by themselves without them, *viz.* where our *ideas* are determined, and known by the names that stand for them: yet when these principles, *viz.* *What is, is*; and, *It is impossible for the same thing to be, and not to be*, are made use of in the probation of propositions, wherein are words standing for complex *ideas*, *v. g.* *man, horse, gold, virtue*; there they are of infinite danger, and most commonly make men receive and retain falshood for manifest truth, and uncertainty for demonstration: upon which follow error, obstinacy, and all the mischiefs that can happen from wrong reasoning. The reason whereof is not, that these principles are less true, or of less force in proving propositions made of terms standing for complex *ideas*, than where the propositions are about simple

Their application dangerous about complex *ideas*.

ideas; but because men mistake generally, thinking that where the same terms are preserved, the propositions are about the same things, though the *ideas* they stand for are in truth different. Therefore these maxims are made use of to support those, which in sound and appearance are contradictory propositions; as is clear in the demonstrations above-mentioned about a *vacuum*. So that whilst men take words for things, as usually they do, these maxims may, and do commonly, serve to prove contradictory propositions: as shall yet be farther made manifest.

Instance in
man.

§. 16. For instance: let *man* be that concerning which you would by these first principles demonstrate any thing, and we shall see, that so far as demonstration is by these principles, it is only verbal, and gives us no certain universal true proposition or knowledge of any being existing without us. *First*, A child having framed the *idea* of a *man*, it is probable, that his *idea* is just like that picture which the painter makes of the visible appearances joined together; and such a complication of *ideas* together in his understanding, makes up the single complex *idea* which he calls *man*, whereof white or flesh-colour in *England* being one, the child can demonstrate to you, that a *negro is not a man*, because white colour was one of the constant simple *ideas* of the complex *idea* he calls *man*: and therefore he can demonstrate by the principle, *it is impossible for the same thing to be, and not to be*, that a *negro is not a man*; the foundation of his certainty being not that universal proposition, which, perhaps, he never heard nor thought of, but the clear distinct perception he hath of his own simple *ideas* of black and white, which he cannot be persuaded to take, nor can ever mistake one for another, whether he knows that maxim or no: and to this child, or any one who hath such an *idea* which he calls *man*, can you never demonstrate that a man hath a soul, because his *idea* of *man* includes no such notion or *idea* in it. And therefore to him,

him, the principle of *what is, is*, proves not this matter; but it depends upon collection and observation, by which he is to make his complex *idea* called *man*.

§. 17. *Secondly*, Another that hath gone farther in framing and collecting the *idea* he calls *man*, and to the outward shape adds *laughter and rational discourse*, may demonstrate, that infants and changelings are no men, by this maxim, *it is impossible for the same thing to be, and not to be*: and I have discoursed with very rational men, who have actually denied that they are men.

§. 18. *Thirdly*, Perhaps another makes up the complex *idea* which he calls *man*, only out of the *ideas* of body in general, and the powers of language and reason, and leaves out the shape wholly: this man is able to demonstrate, that a man may have no hands, but be *quadrupes*, neither of those being included in his *idea* of *man*; and in whatever body or shape he found *speech* and *reason* joined, that was a *man*: because having a clear knowledge of such a complex *idea*, it is certain that *what is, is*.

§. 19. So that, if rightly considered, I think we may say, that where our *ideas* are determined in our minds, and have annexed to them by us known and steady names under those settled determinations, there is *little need*, or *no use* at all of these

Little use of these maxims in proofs where we have clear and distinct ideas.

maxims, to prove the agreement or disagreement of any of them. He that cannot discern the truth or falsehood of such propositions, without the help of these, and the like maxims, will not be *helped* by these maxims to do it: since he cannot be supposed to know the truth of these maxims themselves without proof, if he cannot know the truth of others without proof, which are as self-evident as these. Upon this ground it is, that intuitive knowledge neither requires nor admits any proof, one part of it more than another. He that will suppose it does, takes away the foundation of all knowledge and certainty: and he

that needs any proof to make him certain, and give his assent to this proposition, that *two are equal to two*, will also have need of a proof to make him admit, that *what is, is*. He that needs a probation to convince him, that *two are not three*, that *white is not black*, that *a triangle is not a circle*, &c. or any other two determined distinct *ideas* are not one and the same, will need also a demonstration to convince him, that it is impossible *for the same thing to be, and not to be*.

Their use
dangerous
where our
ideas are con-
fused.

§. 20. And as these maxims are of *little use* where we have determined *ideas*, so they are, as I have shewed, of *dangerous use* where our *ideas* are not determined; and where we use words that are not annexed to determined *ideas*, but such as are of a loose and wandering signification, sometimes standing for one, and sometimes for another *idea*: from which follows mistake and error, which these maxims (brought as proofs to establish propositions, wherein the terms stand for undetermined *ideas*) do by their authority confirm and rivet.

C H A P. VIII.

Of Trifling Propositions.

Some propo-
sitions bring no
increase to our
knowledge.

§. 1. **W**HETHER the maxims treated of in the foregoing chapter be of that use to real knowledge as is generally supposed, I leave to be considered. This, I think, may confidently be affirmed, that there are universal propositions, which though they be certainly true, yet they add no light to our understandings, bring no increase to our knowledge. Such are,

As first, iden-
tical propo-
sitions.

§. 2. *First, All purely identical propositions.* These obviously, and at first blush, appear to contain no instruction in them: for

for when we affirm the said term of itself, whether it be barely verbal, or whether it contains any clear and real *idea*, it shews us nothing but what we must certainly know before, whether such a proposition be either made by, or proposed to us. Indeed, that most general one, *what is, is*, may serve sometimes to shew a man the absurdity he is guilty of, when by circumlocution, or equivocal terms, he would, in particular instances, deny the same thing of itself; because nobody will so openly bid defiance to common sense, as to affirm visible and direct contradictions in plain words: or, if he does, a man is excused if he breaks off any farther discourse with him. But yet, I think, I may say, that neither that received maxim, nor any other identical proposition, teaches us any thing: and though, in such kind of propositions, this great and magnified maxim, boasted to be the foundation of demonstration, may be, and often is made use of to confirm them, yet all it proves amounts to no more than this, that the same word may with great certainty be affirmed of itself, without any doubt of the truth of any such proposition; and let me add also, without any real knowledge.

§. 3. For, at this rate, any very ignorant person, who can but make a proposition, and knows what he means when he says, *ay*, or *no*, may make a million of propositions, of whose truths he may be infallibly certain, and yet not know one thing in the world thereby; v. g. what is a soul, is a soul; or *a soul is a soul, a spirit is a spirit; a fetiche is a fetiche, &c.* These all being equivalent to this proposition, viz. *what is, is*, i. e. *what hath existence, hath existence*; or, *who hath a soul, hath a soul*. What is this more than trifling with words? It is but like a monkey shifting his oyster from one hand to the other; and had he had but words, might, no doubt, have said, oyster in right hand is *subject*, and oyster in left hand is *predicate*: and so might have made a self-evident proposition of oyster, i. e. *oyster is oyster*; and yet,
with

with all this, not have been one whit the wiser, or more knowing: and that way of handling the matter would much at one have satisfied the monkey's hunger, or a man's understanding; and they two would have improved in knowledge and bulk together.

I know there are some who, because *identical propositions* are self-evident, shew a great concern for them, and think they do great service to philosophy by crying them up, as if in them was contained all knowledge, and the understanding were led into all truth by them only. I grant, as forwardly as any one, that they are all true and self-evident. I grant farther, that the foundation of all our knowledge lies in the faculty we have of perceiving the same *idea* to be the same, and of discerning it from those that are different, as I have shewn in the foregoing chapter. But how that vindicates the making use of *identical propositions*, for the improvement of knowledge, from the imputation of trifling, I do not see. Let any one repeat, as often as he pleases, that the *will* is the *will*, or lay what stress on it he thinks fit; of what use is this, and an infinite the like propositions, for the enlarging our knowledge? Let a man abound as much as the plenty of words which he has will permit him in such *propositions* as these; *a law is a law*, and *obligation is obligation*; *right is right*, and *wrong is wrong*; will these and the like ever help him to an acquaintance with *ethics*? Or instruct him or others in the knowledge of *morality*? Those who know not, nor perhaps ever will know, what is *right*, and what is *wrong*, nor the measures of them, can with as much assurance make and infallibly know the truth of these and all such propositions, as he that is best instructed in *morality* can do. But what advance do such propositions give in the knowledge of any thing necessary or useful for their conduct?

He would be thought to do little less than trifle, who, for the enlightening the understanding in any part of knowledge, should be busy with *identical propositions*, and insist on such maxims as these; *substance*

is

is substance, and body is body; a vacuum is a vacuum, and a vortex is a vortex; a centaur is a centaur, and a chimera is a chimera, &c. For these, and all such, are equally true, equally certain, and equally self-evident. But yet they cannot but be counted trifling, when made use of as principles of instruction, and stress laid on them, as helps to knowledge; since they teach nothing but what every one, who is capable of discourse, knows without being told, viz. That the same term is the same term, and the same *idea* the same *idea*. And upon this account it was that I formerly did, and do still think, the offering and inculcating such propositions, in order to give the understanding any new light or inlet into the knowledge of things, no better than trifling.

Instruction lies in something very different; and he that would enlarge his own, or another's mind, to truths he does not yet know, must find out intermediate *ideas*, and then lay them in such order one by another, that the understanding may see the agreement or disagreement of those in question. Propositions that do this are instructive: but they are far from such as affirm the same term of itself; which is no way to advance one's self or others in any sort of knowledge. It no more helps to that, than it would help any one in his learning to read, to have such propositions as these inculcated to him, *an A is an A*, and *a B is a B*; which a man may know as well as any school-master, and yet never be able to read a word as long as he lives. Nor do these, or any such identical propositions, help him one jot forward in the skill of reading, let him make what use of them he can.

If those who blame my calling them *trifling propositions*, had but read, and been at the pains to understand what I had above writ in very plain *English*, they could not but have seen that, by *identical propositions*, I mean only such wherein the same term, importing the same *idea*, is affirmed of itself; which I take to be the proper signification of *identical propositions*; and concerning

concerning all such, I think I may continue safely to say, That to propose them as instructive, is no better than trifling. For no one who has the use of reason can miss them, where it is necessary they should be taken notice of; nor doubt of their truth, when he does take notice of them.

But, if men will call *propositions identical*, wherein the same term is not affirmed of itself, whether they speak more properly than I, others must judge: this is certain, all that they say of propositions that are not *identical*, in my sense, concerns not me, nor what I have said; all that I have said relating to those propositions, wherein the same term is affirmed of itself. And I would fain see an instance, wherein any such can be made use of to the advantage and improvement of any one's knowledge. Instances of other kinds, whatever use may be made of them, concern not me, as not being such as I call *identical*.

Secondly,

When a part
of any com-
plex *idea* is
predicated of
the whole.

§. 4. *Secondly*, Another sort of trifling propositions is, *when a part of the complex idea is predicated of the name of the whole*; a part of the definition of the word defined. Such are all propositions wherein the *genus* is predicated of the *species*, or more comprehensive of less comprehensive terms: for what information, what knowledge carries this proposition in it, *viz. lead is a metal*, to a man who knows the complex *idea* the name *lead* stands for? All the simple *ideas* that go to the complex one signified by the term *metal*, being nothing but what he before comprehended and signified by the name *lead*. Indeed, to a man that knows the signification of the word *metal*, and not of the word *lead*, it is a shorter way to explain the signification of the word *lead*, by saying it is a *metal*, which at once expresses several of its simple *ideas*, than to enumerate them one by one, telling him it is a body very *heavy*, *fusible* and *malleable*.

§. 5. A like trifling it is, to predicate any other part of the definition of the term defined, or to affirm any one of the simple ideas of a complex one, of the name of the whole complex idea; as *all gold is fusible*. For, *fusibility* being one of the simple ideas that goes to the making up the complex one the sound *gold* stands for, what can it be but playing with sounds, to affirm that of the name *gold*, which is comprehended in its received signification? It would be thought little better than ridiculous, to affirm gravely, as a truth of moment, that *gold is yellow*; and I see not how it is any jot more material to say, *it is fusible*, unless that quality be left out of the complex idea, of which the sound *gold* is the mark in ordinary speech. What instruction can it carry with it, to tell one that which he hath been told already, or he is supposed to know before? For I am supposed to know the signification of the word another uses to me, or else he is to tell me. And if I know that the name *gold* stands for this complex idea of *body, yellow, heavy, fusible, malleable*, it will not much instruct me to put it solemnly afterwards in a proposition, and gravely say, *all gold is fusible*. Such propositions can only serve to shew the disingenuity of one, who will go from the definition of his own terms, by reminding him sometimes of it; but carry no knowledge with them, but of the signification of words, however certain they be.

As part of the definition of the term defined.

§. 6. *Every man is an animal*, or living body, is as certain a proposition as can be; but no more conducing to the knowledge of things, than to say, *a palfry is an ambling horse*, or a neighing ambling animal, both being only about the signification of words, and make me know but this, That *body, sense, and motion*, or power of sensation and moving, are three of those ideas that I always comprehend and signify by the word *man*; and where they are not to be found together, the name *man* belongs not to that thing: and so of the other, that
body,

Instance, man and palfry.

body, sense, and a certain way of going, with a certain kind of voice, are some of those *ideas* which I always comprehend, and signify by the word *palfry*; and when they are not to be found together, the name *palfry* belongs not to that thing. It is just the same, and to the same purpose, when any term standing for any one or more of the simple *ideas*, that all together make up that complex *idea* which is called a *man*, is affirmed of the term *man*; v. g. suppose a *Roman* signified by the word *homo* all these distinct *ideas* united in one subject, *corporeitas, sensibilitas, potentia se movendi, rationalitas, risibilitas*, he might, no doubt, with great certainty, universally affirm one, more, or all of these together of the word *homo*, but did no more than say, that the word *homo*, in his country, comprehended in its signification all these *ideas*. Much like a *Romance-Knight*, who by the word *palfry* signified these *ideas*, *body of a certain figure, four-legged, with sense, motion, ambling, neighing, white, used to have a woman on his back*, might with the same certainty, universally affirm also any or all of these of the word *palfry*; but did thereby teach no more, but that the word *palfry*, in his, or romance language, stood for all these, and was not to be applied to any thing, where any of these was wanting. But he that shall tell me, that in whatever thing *sense, motion, reason, and laughter*, were united, that thing had actually a notion of *God*, or would be cast into a sleep by *opium*, made indeed an instructive proposition; because neither *having the notion of God*, nor *being cast into sleep by opium*, being contained in the *idea* signified by the word *man*, we are by such propositions taught something more than barely what the word *man* stands for: and therefore the knowledge contained in it is more than *verbal*.

For this
teaches but the
signification
of words.

§. 7. Before a man makes any proposition, he is supposed to understand the terms he uses in it, or else he talks like a parrot, only making a noise by imitation, and framing certain sounds which he has learnt of others;

others ; but not, as a rational creature, using them for signs of *ideas* which he has in his mind. The hearer also is supposed to understand the terms as the speaker uses them, or else he talks jargon, and makes an unintelligible noise. And therefore he trifles with words, who makes such a proposition, which, when it is made, contains no more than one of the terms does, and which a man was supposed to know before, *v. g. a triangle hath three sides, or saffron is yellow.* And this is no farther tolerable, than where a man goes to explain his terms, to one who is supposed, or declares himself not to understand him: and then *he teaches only the signification of that word*, and the use of that sign.

§. 8. We can know then the truth of two sorts of propositions, with perfect *certainty*; the one is, of those trifling propositions, which have a certainty in them, but it is only a *verbal certainty*, but not instructive. And, secondly, we can know the truth, and so may be *certain* in propositions, which affirm something of another, which is a necessary consequence of its precise complex *idea*, but not contained in it. As that the *external angle of all triangles is bigger than either of the opposite internal angles*; which relation of the outward angle to either of the opposite internal angles, making no part of the complex *idea* signified by the name triangle, this is a real truth, and conveys with it instructive *real knowledge*.

But no real knowledge.

§. 9. We having little or no knowledge of what combinations there be of simple *ideas* existing together in substances, but by our senses, we cannot make any universal *certain* propositions concerning them, any farther than our nominal essences lead us; which being to a very few and inconsiderable truths, in respect of those which depend on their real constitutions, the general *propositions* that are made *about substances, if they are certain, are for the most part but trifling*; and

General propositions concerning substances, are often trifling.

if

if they are instructive, are uncertain, and such as we can have no knowledge of their real truth, how much soever constant observation and analogy may assist our judgments in guessing. Hence it comes to pass, that one may often meet with very clear and coherent discourses, that amount yet to nothing. For it is plain, that names of substantial beings, as well as others, as far as they have relative significations affixed to them, may with great truth be joined negatively and affirmatively in propositions, as their relative definitions make them fit to be so joined; and propositions consisting of such terms may, with the same clearness, be deduced one from another, as those that convey the most real truths; and all this, without any knowledge of the nature or reality of things existing without us. By this method, one may make demonstrations and undoubted propositions in words, and yet thereby advance not one jot in the knowledge of the truth of things; *v. g.* he that having learnt these following words, with their ordinary mutually relative acceptations annexed to them, *v. g. substance, man, animal, form, soul, vegetative, sensitive, rational*, may make several undoubted propositions about the soul, without knowing at all what the soul really is; and of this sort a man may find an infinite number of propositions, reasonings, and conclusions, in books of metaphysics, school-divinity, and some sort of natural philosophy; and, after all, know as little of God, *spirits*, or *bodies*, as he did before he set out.

And why. §. 10. He that hath liberty to define, *i. e.* determine the signification of his names of substances, (as certainly every one does in effect, who makes them stand for his own *ideas*) and makes their significations at a venture, taking them from his own or other men's fancies, and not from an examination or enquiry into the nature of things themselves, may with little trouble demonstrate them one of another, according to those several respects and mutual relations he has given them one to another; wherein,

wherein, however things agree or disagree in their own nature, he needs mind nothing but his own notions, with the names he hath bestowed upon them: but thereby no more increases his own knowledge, than he does his riches, who, taking a bag of counters, calls one, in a certain place, a *pound*; another, in another place, a *shilling*; and a third, in a third place, a *penny*; and so proceeding, may undoubtedly reckon right, and cast up a great sum, according to his counters so placed, and standing for more or less, as he pleases, without being one jot the richer, or without even knowing how much a pound, shilling, or penny is, but only that one is contained in the other twenty times, and contains the other twelve; which a man may also do in the signification of words, by making them, in respect of one another, more, or less, or equally comprehensive.

§. 11. Though yet concerning most words used in discourses, especially argumentative and controversial, there is this more to be complained of, which is the worst sort of *trifling*, and which sets us yet farther from the certainty of knowledge we hope to attain by them, or find in them, *viz.* that most writers are so far from instructing us in the nature and knowledge of things, that they *use their words loosely* and uncertainly, and do not, by using them constantly and steadily in the same significations, make plain and clear deductions of words one from another, and make their discourses coherent and clear, (how little soever it were instructive) which were not difficult to do, did they not find it convenient to shelter their ignorance, or obstinacy, under the obscurity and perplexedness of their terms: to which, perhaps, inadvertency and ill custom do in many men much contribute.

Thirdly,
Using words
variously, is
trifling with
them.

§. 12. To conclude, *barely verbal propositions* may be known by these following marks.

Marks of verbal propositions.

First, Predi-
cation in ab-
stract.

First, All propositions, wherein two abstract terms are affirmed one of another, are barely about the signification of sounds. For, since no abstract *idea* can be the same with any other but itself, when its abstract name is affirmed of any other term, it can signify no more but this, that it may, or ought to be called by that name; or that these two names signify the same *idea*. Thus, should any one say, that *parsimony is frugality*; that *gratitude is justice*; that this or that action is or is not *temperance*; however specious these and the like propositions may at first sight seem, yet when we come to press them, and examine nicely what they contain, we shall find, that it all amounts to nothing but the signification of those terms.

Secondly, A
part of the de-
finition pre-
dicated of any
term.

§. 13. *Secondly*, All propositions, wherein a part of the complex *idea*, which any term stands for, is *predicated of that term*, are only verbal; v. g. to say, *that gold is a metal, or heavy*. And thus all propositions, wherein more comprehensive words, called *genera*, are affirmed of subordinate or less comprehensive, called *species* or *individuals*, are barely verbal.

When by these two rules we have examined the propositions that make up the discourses we ordinarily meet with, both in and out of books, we shall, perhaps, find that a greater part of them than is usually suspected, are purely about the signification of words, and contain nothing in them but the use and application of these signs.

This, I think, I may lay down for an infallible rule, That wherever the distinct *idea* any word stands for, is not known and considered, and something not contained in the *idea*, is not affirmed, or denied of it, there our thoughts stick wholly in sounds, and are able to attain no real truth or falsehood. This, perhaps, if well heeded, might save us a great deal of useless amusement and dispute; and very much shorten our trouble and wandering in the search of real and true knowledge.

C H A P. IX.

Of our Knowledge of Existence.

§. 1. **H**ITHERTO we have only considered the essences of things, which being only abstract *ideas*, and thereby removed in our thoughts from particular existence, (that being the proper operation of the mind, in abstraction, to consider an *idea* under no other existence, but what it has in the understanding) gives us no knowledge of real existence at all. Where, by the way, we may take notice, that *universal propositions*, of whose truth or falshood we can have certain knowledge, concern not *existence*; and farther, that all *particular affirmations or negations*, that would not be certain if they were made general, are only concerning *existence*; they declaring only the accidental union or separation of *ideas* in things existing, which in their abstract natures have no known necessary union or repugnancy.

General certain propositions concern not existence.

§. 2. But leaving the nature of propositions, and different ways of predication, to be considered more at large in another place, let us proceed now to enquire concerning our knowledge of the *existence* of things, and how we come by it. I say then, that we have the knowledge of *our own existence* by intuition; of the *existence of GOD* by demonstration; and of other things by sensation.

A three-fold knowledge of existence.

§. 3. As for *our own* existence, we perceive it so plainly and so certainly, that it neither needs, nor is capable of any proof. For nothing can be more evident to us, than our own existence. *I think, I reason, I feel pleasure and pain*: can any of these be more evident to me, than my own existence? If I doubt of all other things,

Our knowledge of our own existence is intuitive.

that very doubt makes me perceive my own *existence*, and will not suffer me to doubt of that. For, if I know *I feel pain*, it is evident I have as certain perception of my own existence, as of the existence of the pain I feel: or, if I know *I doubt*, I have as certain perception of the existence of the thing doubting, as of that thought which I call *doubt*. Experience then convinces us, that we have an intuitive knowledge of our *own existence*, and an internal infallible perception that we are. In every act of sensation, reasoning, or thinking, we are conscious to ourselves of our own being; and, in this matter, come not short of the highest degree of certainty.

C H A P. X.

Of our Knowledge of the Existence of a GOD.

We are capable of knowing certainly that there is a GOD.

§. 1. **T**HOUGH GOD has given us no innate *ideas* of himself; though he has stamped no original characters on our minds, wherein we may read his being; yet having furnished us with those faculties our minds are endowed with, he hath not left himself without witness; since we have sense, perception, and reason, and cannot want a clear proof of him, as long as we carry ourselves about us. Nor can we justly complain of our ignorance in this great point, since he has so plentifully provided us with the means to discover, and know him, so far as is necessary to the end of our being, and the great concernment of our happiness. But though this be the most obvious truth that reason discovers, and though its evidence be (if I mistake not) equal to mathematical certainty, yet it requires thought and attention, and the mind must apply itself to a regular deduction of it from some part of our intuitive knowledge, or else we shall be as uncertain and ignorant of this, as of other *propositions*,

tions, which are in themselves capable of clear demonstration. To shew therefore, that we are capable of knowing, i. e. *being certain that there is a GOD*, and how we may come by this certainty, I think we need go no farther than ourselves, and that undoubted knowledge we have of our own existence.

§. 2. I think it is beyond question, that *man has a clear perception of his own being*; he knows certainly that he exists, and that he is something. He that can doubt, whether he be any thing or no, I speak not to, no more than I would argue with pure nothing, or endeavour to convince non-entity, that it were something. If any one pretends to be so sceptical, as to deny his own existence, (for really to doubt of it, is manifestly impossible) let him for me enjoy his beloved happiness of being nothing, until hunger, or some other pain, convince him to the contrary. This then, I think, I may take for a truth, which every one's certain knowledge assures him of beyond the liberty of doubting, viz. that he is something that actually exists.

Man knows
that he him-
self is.

§. 3. In the next place, man knows by an intuitive certainty, that bare *nothing can no more produce any real being, than it can be equal to two right angles*. If a man knows not that non-entity, or the absence of all being, cannot be equal to two right angles; it is impossible he should know any demonstration, in *Euclid*. If therefore we know there is some real being, and that non-entity cannot produce any real being, it is an evident demonstration, that from *eternity* there has been something; since what was not from *eternity*, had a beginning; and what had a beginning, must be produced by something else.

He knows al-
so that no-
thing cannot
produce a
being; there-
fore some-
thing eternal.

§. 4. Next, it is evident, that what had its being and beginning from another, must also have all that which is in, and belongs to its being, from another too. All the powers it has, must be owing to, and received from

That eternal
Being must be
most power-
ful.

the same source. This eternal source then of all being must also be the source and original of all power: and so this *eternal Being must also be most powerful.*

And most knowing. §. 5. Again, A man finds in himself *perception* and *knowledge*. We have then got one step farther; and we are certain now, that there is not only some being, but some knowing intelligent being in the world.

There was a time then, when there was no knowing being, and when knowledge began to be; or else, there has been also a *knowing being from eternity*. If it be said, there was a time when no being had any knowledge, when that eternal being was void of all understanding; I reply, that then it was impossible there should ever have been any knowledge: it being as impossible that things wholly void of knowledge, and operating blindly, and without any perception, should produce a knowing being, as it is impossible that a triangle should make itself three angles bigger than two right ones. For it is as repugnant to the *idea* of senseless *matter*, that it should put into itself sense, perception, and knowledge, as it is repugnant to the *idea* of a triangle, that it should put into itself greater angles than two right ones.

And therefore God. §. 6. Thus from the consideration of ourselves, and what we infallibly find in our own constitutions, our reason leads us to the knowledge of this certain and evident truth, that *there is an eternal, most powerful, and most knowing Being*; which whether any one will please to call *God*, it matters not. The thing is evident; and from this *idea* duly considered, will easily be deduced all those other attributes, which we ought to ascribe to this eternal Being. If nevertheless any one should be found so senselessly arrogant, as to suppose man alone knowing and wise, but yet the product of mere ignorance and chance; and that all the rest of the universe acted only by that blind hap-hazard; I shall leave with him that very rational and emphatical rebuke of *Tully*, L.

2. *de Leg.* to be considered at his leisure: 'What can be more fillily arrogant and misbecoming, than for a man to think that he has a mind and understanding in him, but yet in all the universe besides there is no such thing? Or that those things, which with the utmost stretch of his reason he can scarce comprehend, should be moved and managed without any reason at all?' *Quid est enim verius, quam neminem esse oportere tam stulte arrogantem, ut in se mentem & rationem putet inesse, in cælo mundoque non putet? Aut ea, quæ vix summâ ingenii ratione comprehendat, nullâ ratione moveri putet?*

From what has been said, it is plain to me, we have a more certain knowledge of the existence of a God, than of any thing our senses have not immediately discovered to us. Nay, I presume I may say, that we more certainly know that there is a God than that there is any thing else without us. When I say we *know*, I mean there is such a knowledge within our reach, which we cannot miss, if we will but apply our minds to that, as we do to several other enquiries.

§. 7. *How far the idea of a most perfect being, which a man may frame in his mind, does, or does not, prove the existence of a God, I will not here examine.* For in the different make of men's tempers, and application of their thoughts, some arguments prevail more on one, and some on another, for the confirmation of the same truth. But yet, I think, this I may say, that it is an ill way of establishing this truth, and silencing atheists, to lay the whole stress of so important a point as this, upon that sole foundation; and take some men's having that *idea* of God in their minds, (for it is evident, some men have none, and some worse than none, and the most very different) for the only proof of a Deity; and out of an overfondness of that darling invention, cashier, or at least endeavour to invalidate all other arguments, and forbid us to hearken to those proofs, as being weak or fallacious.

Our idea of a most perfect being, not the sole proof of a God.

cious, which our own existence, and the sensible parts of the universe, offer so clearly and cogently to our thoughts, that I deem it impossible for a considering man to withstand them: for I judge it as certain and clear a truth as can any where be delivered, that *the invisible things of God are clearly seen from the creation of the world, being understood by the things that are made, even his eternal power and God-head.* Though our own being furnishes us, as I have shewn, with an evident and incontestable proof of a Deity, and I believe nobody can avoid the cogency of it, who will but as carefully attend to it as to any other demonstration of so many parts; yet this being so fundamental a truth, and of that consequence, that all religion and genuine morality depend thereon, I doubt not but I shall be forgiven by my reader, if I go over some parts of this argument again, and enlarge a little more upon them.

Something
from eternity.

§. 8. There is no truth more evident, than that *something* must be *from eternity*. I never yet heard of any one so unreasonable, or that could suppose so manifest a contradiction, as a time wherein there was perfectly nothing: this being of absurdities the greatest, to imagine that pure nothing, the perfect negation and absence of all beings, should ever produce any real existence.

It being then unavoidable for all rational creatures to conclude that something has existed from eternity, let us next see what kind of thing that must be.

Two sorts of
beings, cogi-
tative and in-
cogitative.

§. 9. There are but two sorts of beings in the world, that man knows or conceives: *First*, Such as are purely material, without sense, perception or thought, as the clippings of our beards, and parings of our nails.

Secondly, Sensible, thinking, perceiving beings, such as we find ourselves to be: which, if you please, we will hereafter call *cogitative* and *incogitative* beings; which, to our present purpose, if for nothing else, are perhaps better terms than material and immaterial.

§. 10.

§. 10. If then there must be something eternal, let us see what sort of being it must be. And to that it is very obvious to reason, that it must necessarily be a *co-gitative* being. For it is as impossible to conceive that ever bare incogitative matter should produce a thinking intelligent being, as that nothing should of itself produce matter. Let us suppose any parcel of matter eternal, great or small, we shall find it, in itself, able to produce nothing. For example, let us suppose the matter of the next pebble we meet with, eternal, closely united, and the parts firmly at rest together, if there were no other being in the world, must it not eternally remain so, a dead, inactive lump? Is it possible to conceive it can add motion to itself, being purely matter, or produce any thing? Matter then, by its own strength, cannot produce in itself so much as motion: the motion it has must also be from eternity, or else be produced and added to matter, by some other being more powerful than matter; matter, as is evident, having not power to produce motion in itself. But let us suppose motion eternal too; yet matter, *incogitative matter* and *motion*, whatever changes it might produce of figure and bulk, *could never produce thought*. Knowledge will still be as far beyond the power of motion and matter to produce, as matter is beyond the power of *nothing* or *non-entity* to produce. And I appeal to every one's own thoughts, whether he cannot as easily conceive matter produced by *nothing*, as thought to be produced by pure matter, when before there was no such thing as thought, or an intelligent being existing. Divide matter into as minute parts as you will, (which we are apt to imagine a sort of spiritualizing, or making a thinking thing of it) vary the figure and motion of it as much as you please, a globe, cube, cone, prism, cylinder, &c. whose diameters are but 1000000th. part of a Gry (a),

Incogitative being cannot produce a cogitative.

(a) A gry is $\frac{1}{10}$ of a line, a line $\frac{1}{10}$ of an inch, an inch $\frac{1}{10}$ of a philosophical foot, a philosophical foot $\frac{1}{3}$ of a pendulum,

will

whose diadroms, in the latitude of 45 degrees, are each equal to one second of time, or $\frac{1}{720}$ of a minute. I have affectedly made use of this measure here, and the parts of it, under a decimal division, with names to them; because I think it would be of general convenience, that this should be the common measure in the commonwealth of letters.

do any where exist. They knock, impel, and resist one another just as the greater do, and that is all they can do. So that if we will suppose nothing first, or eternal; *matter* can never begin to be: if we suppose bare *matter*, without motion, eternal; *motion* can never begin to be: if we suppose only *matter* and *motion* first, or eternal; *thought* can never begin to be. For it is impossible to conceive, that *matter*, either with or without motion, could have originally in and from itself, sense, perception and knowledge; as is evident from hence, that then sense, perception and knowledge, must be a property eternally inseparable from *matter*, and every particle of it. Not to add, that though our general or specifick conception of *matter* makes us speak of it as one thing, yet really all *matter* is not one individual thing, neither is there any such thing existing as one material being, or one single body that we know or can conceive. And therefore, if *matter* were the eternal first cogitative being, there would not be one eternal infinite cogitative being, but an infinite number of eternal finite cogitative beings, independent one of another, of limited force, and distinct thoughts, which could never produce that order, harmony and beauty, which is to be found in nature. Since therefore whatsoever is the first eternal *being*, must necessarily be cogitative; and whatsoever is first of all things, must necessarily contain in it, and actually have, at least, all the perfections that can ever after exist: nor can it ever give to another any

will operate no otherwise upon other bodies of proportionable bulk, than those of an inch or foot diameter; and you may as rationally expect to produce sense, thought, and knowledge, by putting together, in a certain figure and motion, gross particles of *matter*, as by those that are the very minutest that

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any perfection that it hath not, either actually in itself, or at least in a higher degree: it necessarily follows, that the first eternal being cannot be *matter*.

§. 11. If therefore it be evident, that *something* necessarily must exist from eternity, it is also as evident, that *that something* must necessarily be a *cogitative being*: for it is as impossible, that incogitative *matter* should produce a cogitative being, as that nothing, or the negation of all being, should produce a positive being or *matter*.

Therefore there has been an eternal wisdom.

§. 12. Though this discovery of the *necessary existence of an eternal mind*, does sufficiently lead us into the knowledge of GOD; since it will hence follow, that all other knowing beings that have a beginning, must depend on him, and have no other ways of knowledge, or extent of power, than what he gives them; and therefore if he made those, he made also the less excellent pieces of this universe, all inanimate beings; whereby his *omniscience, power and providence* will be established, and all his other attributes necessarily follow: yet, to clear up this a little farther, we will see what doubts can be raised against it.

§. 13. *First*, Perhaps it will be said, that though it be as clear as demonstration can make it, that there must be an eternal *Being*, and that *Being* must also be knowing; yet it does not follow, but that thinking *Being* may also be material. Let it be so: it equally still follows, that there is a GOD: for if there be an eternal, omniscient, omnipotent *Being*, it is certain, that there is a GOD, whether you imagine that *Being*, to be material or no. But herein, I suppose, lies the danger and deceit of that supposition: there being no way to avoid the demonstration, that there is an eternal knowing *Being*, men, devoted to *matter*, would willingly have it granted, that this knowing *Being* is material; and then letting slide out of their minds, or the discourse, the demonstration whereby an eternal know-

Whether material or no.

ing *Being* was proved necessarily to exist, would argue all to be *matter*, and so deny a GOD, that is, an eternal cogitative *Being*; whereby they are so far from establishing, that they destroy their own hypothesis. For if there can be, in their opinion, eternal *matter*, without any eternal cogitative *Being*, they manifestly separate *matter* and *thinking*, and suppose no necessary connexion of the one with the other, and so establish the necessity of an eternal Spirit, but not of *matter*, since it has been proved already, that an eternal cogitative *Being* is unavoidably to be granted. Now, if thinking and *matter* may be separated, *the eternal existence of matter will not follow from the eternal existence of a cogitative Being*, and they suppose it to no purpose.

Not material,
first, because
every particle
of matter is
not cogitative.

§. 14. But now let us see how they can satisfy themselves or others, that this *eternal thinking Being is material*.

First, I would ask them, whether they imagine that all matter, *every particle of matter, thinks*? This, I suppose, they will scarce say, since then there would be as many eternal thinking beings, as there are particles of matter, and so an infinity of Gods. And yet, if they will not allow matter as matter, that is, every particle of *matter* to be as well cogitative as extended, they will have as hard a task to make out to their own reasons a *cogitative* being out of *incogitative* particles, as an extended being out of unextended parts, if I may so speak.

Secondly,
One particle
alone of mat-
ter, cannot
be cogitative.

§. 15. *Secondly*, If all matter does not think, I next ask, whether it be *only one atom that does so*? This has as many absurdities as the other; for then this atom of *matter* must be alone eternal, or not.

If this alone be eternal, then this alone, by its powerful thought or will, made all the rest of *matter*. And so we have the creation of *matter* by a powerful thought, which is that the materialists stick at: for, if they suppose one single thinking atom to have produced all the rest of *matter*, they cannot ascribe that pre-

eminency

eminency to it upon any other account than that of its thinking, the only supposed difference. But allow it to be by some other way, which is above our conception, it must still be creation, and these men must give up their great maxim, *ex nihilo nil fit*. If it be said that all the rest of *matter* is equally eternal, as that thinking atom, it will be to say any thing at pleasure, though never so absurd: for to suppose all *matter* eternal, and yet one small particle in knowledge and power infinitely above all the rest, is, without any the least appearance of reason, to frame any hypothesis. Every particle of *matter*, as *matter*, is capable of all the same figures and motions of any other; and I challenge any one, in his thoughts, to add any thing else to one above another.

§. 16. *Thirdly*, If then neither one peculiar atom alone can be this eternal thinking being, nor all *matter*, as *matter*, *i. e.* every particle of *matter*, can be it, it only remains, that it is *some certain system of matter* duly put together, that is this *thinking eternal Being*. This is that which, I imagine, is that notion which men are aptest to have of GOD, who would have him a material being, as most readily suggested to them by the ordinary conceit they have of themselves, and other men, which they take to be material thinking beings. But this imagination, however more natural, is no less absurd than the other: for to suppose the eternal thinking Being to be nothing else but a composition of particles of *matter*, each whereof is incogitative, is to ascribe all the wisdom and knowledge of that eternal Being only to the juxtaposition of parts; than which nothing can be more absurd. For unthinking particles of *matter*, however put together, can have nothing thereby added to them, but a new relation of position, which it is impossible should give thought and knowledge to them.

Thirdly, A system of incogitative matter, cannot be cogitative.

Whether in
motion, or at
rest.

§. 17. But farther, this *corporeal system* either has all its parts at rest, or it is a certain motion of the parts wherein its thinking consists. If it be perfectly at rest, it is but one lump, and so can have no privilege above one atom.

If it be the motion of its parts on which its thinking depends, all the thoughts there must be unavoidably accidental and limited; since all the particles that by motion cause thought, being each of them in itself without any thought, cannot regulate its own motions, much less be regulated by the thought of the whole, since that thought is not the cause of motion, (for then it must be antecedent to it, and so without it) but the consequence of it: whereby freedom, power, choice, and all rational and wise thinking or acting, will be quite taken away: so that such a thinking being will be no better nor wiser than pure blind *matter*, since to resolve all into the accidental unguided motions of blind *matter*, or into thought depending on unguided motions of blind *matter*, is the same thing; not to mention the narrowness of such thoughts and knowledge that must depend on the motion of such parts. But there needs no enumeration of any more absurdities and impossibilities in this hypothesis, (however full of them it be) than that before mentioned; since, let this thinking system be all, or a part of the *matter* of the universe, it is impossible that any one particle should either know its own, or the motion of any other particle, or the whole know the motion of every particular; and so regulate its own thoughts or motions, or indeed have any thought resulting from such motion.

Matter not co-
eternal with
an eternal
mind.

§. 18. Others would have *matter* to be *eternal*, notwithstanding that they allow an eternal, cogitative, immaterial Being. This, though it take not away the *being* of a GOD, yet since it denies one and the first great piece of his workmanship, the creation, let us con-
sider

sider it a little. *Matter* must be allowed eternal: Why? Because you cannot conceive how it can be made out of nothing: why do you not also think yourself eternal? You will answer perhaps, because about twenty or forty years since, you began to be. But if I ask you what that *you* is, which began then to be, you can scarce tell me. The *matter* whereof you are made, began not then to be, for if it did, then it is not eternal; but it began to be put together in such a fashion and frame as makes up your body; but yet that frame of particles is not you, it makes not that thinking thing you are: (for I have now to do with one, who allows an eternal, immaterial, thinking *Being*, but would have unthinking *matter* eternal too:) therefore when did that thinking thing begin to be? If it did never begin to be, then have you always been a thinking thing from eternity; the absurdity whereof I need not confute, till I meet with one who is so void of understanding, as to own it. If therefore you can allow a *thinking thing* to be made out of nothing (as all things that are not eternal must be) why also can you not allow it possible for a material *being* to be made out of *nothing*, by an equal power, but that you have the experience of the one in view, and not of the other? Though, when well considered, creation of a spirit will be found to require no less power, than the creation of *matter*. Nay, possibly, if we would emancipate ourselves from vulgar notions, and raise our *thoughts* as far as they would reach, to a closer contemplation of *things*, we might be able to aim at some dim and seeming conception how *matter* might at first be made, and begin to exist by the power of that eternal first *Being*; but to give *beginning* and *being* to a spirit, would be found a more inconceivable effect of omnipotent power. But this being what would perhaps lead us too far from the notions on which the philosophy now in the world is built, it would not be pardonable to deviate so far from them, or to enquire so far as grammar itself would authorize, if the common
settled

settled opinion opposes it; especially in this place, where the received doctrine serves well enough to our present purpose, and leaves this past doubt, that the creation or beginning of any one SUBSTANCE out of nothing, being once admitted, the creation of all other, but the CREATOR himself, may with the same ease, be supposed.

§. 19. But you will say, Is it not impossible to admit of the *making any thing out of nothing*, since we cannot possibly conceive it? I answer, No; 1. Because it is not reasonable to deny the power of an infinite *Being*, because we cannot comprehend its operations. We do not deny other effects upon this ground, because we cannot possibly conceive the manner of their production. We cannot conceive how any *thing* but impulse of body can move body; and yet that is not a reason sufficient to make us deny it possible, against the constant experience we have of it in ourselves, in all our voluntary motions, which are produced in us only by the free action or thought of our own minds; and are not, nor can be the effects of the impulse or determination of the motion of blind *matter*, in or upon our bodies; for then it could not be in our power or choice to alter it. For example: my right hand writes, whilst my left hand is still; what causes rest in one, and motion in the other? Nothing but my will, a thought of my mind; my thought only changing, the right hand rests, and the left hand moves. This is *matter* of fact, which cannot be denied: explain this, and make it intelligible, and then the next step will be to understand creation: for the giving a new determination to the motion of the animal spirits, (which some make use of to explain voluntary motion) clears not the difficulty one jot; to alter the determination of motion being, in this case, no easier nor less, than to give motion itself; since the new determination given to the animal spirits, must be either immediately by thought, or by some other body put in their way by thought, which was not in their way before,

before, and so must owe its motion to thought; either of which leaves voluntary motion as unintelligible as it was before. In the mean time, it is an over-valuing ourselves, to reduce all to the narrow measure of our capacities: and to conclude all things impossible to be done, whose manner of doing exceeds our comprehension. This is to make our comprehension infinite, or GOD finite, when what he can do, is limited to what we can conceive of it. If you do not understand the operations of your own finite mind, that thinking thing within you, do not deem it strange, that you cannot comprehend the operations of that eternal infinite mind, who made and governs all things, and whom the heaven of heavens cannot contain.

C H A P. XI.

Of our Knowledge of the Existence of other Things.

§. 1. **T**HE Knowledge of our own being we have by intuition. It is to be had only by sensation.
The existence of a GOD reason clearly makes known to us, as has been shewn.

The *knowledge of the existence* of any other thing we can have only by *sensation*: for there being no necessary connexion of *real existence* with any *idea* a man hath in his memory, nor of any other existence, but that of GOD, with the existence of any particular man; no particular man can know the *existence* of any other being, but only when, by actual operating upon him, it makes itself perceived by him. For the having the *idea* of any thing in our mind no more proves the existence of that thing, than the picture of a man evidences his being in the world, or the visions of a dream make thereby a true history.

§. 2. It is therefore the actual receiving of *ideas* from without, that gives us notice of the *existence* of other things, and makes us know, that something doth exist

Instance,
whiteness of
this paper.

at that time without us, which causes that *idea* in us, though perhaps we neither know nor consider how it does it: for it takes not from the certainty of our senses, and the *ideas* we receive by them, that we know not the manner wherein they are produced; v. g. whilst I write this, I have, by the paper affecting my eyes, that *idea* produced in my mind, which, whatever object causes, I call *white*; by which I know that that quality or accident (*i. e.* whose appearance before my eyes always causes that *idea*) doth really exist, and hath a being without me. And of this the greatest assurance I can possibly have, and to which my faculties can attain, is the testimony of my eyes, which are the proper and sole judges of this thing; whose testimony I have reason to rely on, as so certain, that I can no more doubt, whilst I write this, that I see white and black, and that something really exists that causes that sensation in me, than that I write or move my hand; which is a certainty as great as human nature is capable of, concerning the existence of any thing but a man's self alone, and of GOD.

This, though not so certain as demonstration, yet may be called knowledge, and proves the existence of things without us.

§. 3. *The notice we have by our senses of the existing of things without us*, though it be not altogether so certain as our intuitive knowledge, or the deductions of our reason, employed about the clear abstract *ideas* of our own minds; yet it is an assurance that *deserves the name of knowledge*.

If we persuade ourselves, that our faculties act and inform us right concerning the existence of those objects that affect them, it cannot pass for an ill-grounded confidence: for I think nobody can, in earnest, be so sceptical, as to be uncertain of the existence of those things which he sees and feels. At least, he that can doubt so far, (whatever he may have with his own thoughts) will never have any controversy with me; since he can never be sure I say any thing contrary to his opinion. As to myself, I think GOD has given me assurance enough of the existence of

of things without me; since by their different application I can produce in myself both pleasure and pain, which is one great concernment of my present state. This is certain, the confidence that our faculties do not herein deceive us, is the greatest assurance we are capable of, concerning the existence of material beings. For we cannot act any thing, but by our faculties; nor talk of knowledge itself, but by the help of those faculties which are fitted to apprehend even what knowledge is. But, besides the assurance we have from our senses themselves, that they do not err in the information they give us of the existence of things without us, when they are affected by them, we are farther confirmed in this assurance by other concurrent reasons.

§. 4. *First*, It is plain, those perceptions are produced in us by exterior causes affecting our senses: because *those that want the organs of any sense, never can have the ideas belonging to that sense* produced in their minds. This is too evident to be doubted; and therefore we cannot but be assured, that they come in by the organs of that sense, and no other way. The organs themselves, it is plain, do not produce them; for then the eyes of a man in the dark would produce colours, and his nose smell roses in the winter: But we see nobody gets the relish of a pine-apple, till he goes to the *Indies* where it is, and tastes it.

First, because we cannot have them but by the inlet of the senses.

§. 5. *Secondly*, Because *sometimes I find, that I cannot avoid the having those ideas produced in my mind*: for though, when my eyes are shut, or windows fast, I can at pleasure recall to my mind the *ideas of light, or the sun*, which former sensations had lodged in my memory; so I can at pleasure lay by that *idea*, and take into my view that of the smell of a rose, or taste of sugar. But if I turn my eyes at noon towards the sun, I cannot avoid the *ideas* which the light or sun then produces in me.

2. Because an *idea* from actual sensation, and another from memory, are very distinct perceptions.

So that there is a manifest difference between the *ideas* laid up in my memory, (over which, if they were there only, I should have constantly the same power to dispose of them, and lay them by at pleasure) and those which force themselves upon me, and I cannot avoid having. And therefore it must needs be some exterior cause, and the brisk acting of some objects without me, whose efficacy I cannot resist, that produces those *ideas* in my mind, whether I will or no. Besides, there is nobody who doth not perceive the difference in himself, between contemplating the sun, as he hath the *idea* of it in his memory, and actually looking upon it: of which two his perception is so distinct, that few of his *ideas* are more distinguishable one from another: and therefore he hath certain knowledge, that they are not both memory, or the actions of his mind, and fancies only within him; but that actual seeing hath a cause without.

gdly, Pleasure or pain which accompanies actual sensation, accompanies not the returning of those *ideas* without the external objects.

§. 6. *Thirdly*, Add to this, that *many of those ideas are produced in us with pain, which afterwards we remember without the least offence.* Thus the pain of heat or cold, when the *idea* of it is revived in our minds, gives us no disturbance; which, when felt, was very troublesome, and is again, when actually repeated; which is occasioned by the disorder the external object causes in our bodies, when applied to it. And we remember the pain of *hunger*, *thirst*, or the *head-ach*, without any pain at all: which would either never disturb us, or else constantly do it, as often as we thought of it, were there nothing more but *ideas* floating in our minds, and appearances entertaining our fancies, without the real existence of things affecting us from abroad. The same may be said of pleasure, accompanying several actual sensations: and though mathematical demonstrations depend not upon sense, yet the examining them by diagrams gives great credit to the evidence of our sight, and seems to give it a

certainly

certainly approaching to that of demonstration itself. For it would be very strange, that a man should allow it for an undeniable truth, that two angles of a figure which he measures by lines and angles of a diagram, should be *bigger* one than the other; and yet doubt of the existence of those lines and angles, which, by looking on, he makes use of to measure that by.

§. 7. *Fourthly*, Our senses, in many cases, bear witness to the truth of each other's report, concerning the existence of sensible things without us. He that sees a *fire* may, if he doubt whether it be any thing more than a bare fancy, feel it too; and be convinced, by putting his hand in it. Which certainly could never be put into such exquisite pain by a bare *idea* or *phantom*, unless that the pain be a fancy too: which yet he cannot, when the burn is well, by raising the *idea* of it, bring upon himself again.

4thly, Our senses assist one another's testimony of the existence of outward things.

Thus I see, whilst I write this, I can change the appearance of the paper, and, by designing the letters, tell before-hand what new *idea* it shall exhibit the very next moment, barely by drawing my pen over it; which will neither appear, (let me fancy as much as I will) if my hand stand still; or though I move my pen, if my eyes be shut: nor, when those characters are once made on the paper, can I chuse afterwards but see them as they are; that is, have the *ideas* of such letters as I have made. Whence it is manifest, that they are not barely the sport and play of my own imagination, when I find that the characters, that were made at the pleasure of my own thoughts, do not obey them; nor yet cease to be, whenever I shall fancy it, but continue to affect my senses constantly and regularly, according to the figures I made them. To which if we will add, that the sight of those shall, from another man, draw such sounds as I before-hand design they shall stand for, there will be little reason left to doubt that those words I write do really exist

without me, when they cause a long series of regular sounds to affect my ears, which could not be the effect of my imagination, nor could my memory retain them in that order.

This certainty
is as great as
our condition
needs.

§. 8. But yet, if, after all this, any one will be so sceptical as to distrust his senses, and to affirm, that all we see and hear, feel and taste, think and do, during our whole being, is but the series and deluding appearances of a long dream, whereof there is no reality, and therefore will question the existence of all things, or our knowledge of any thing; I must desire him to consider, that if all be a dream, then he doth but dream that he makes the question; and so it is not much matter, that a waking man should answer him. But yet, if he pleases, he may dream that I make him this answer, that *the certainty of things existing in rerum natura*, when we have *the testimony of our senses* for it, is not only *as great* as our frame can attain to, but *as our condition needs*. For our faculties being suited, not to the full extent of being, nor to a perfect, clear, comprehensive knowledge of things, free from all doubt and scruple, but to the preservation of us, in whom they are, and accommodated to the use of life; they serve to our purpose well enough, if they will but give us certain notice of those things, which are convenient or inconvenient to us. For he that sees a candle burning, and hath experimented the force of its flame, by putting his finger in it, will little doubt that this is something existing without him, which does him harm, and puts him to great pain: which is assurance enough, when no man requires greater *certainty* to govern his actions by, than what is as certain as his actions themselves. And if our dreamer pleases to try whether the glowing heat of a glass furnace be barely a wandering imagination in a drowsy man's fancy, by putting his hand into it, he may, perhaps, be awakened into a certainty greater than he could wish, that it is something more than bare

bare imagination. So that this evidence is as great as we can desire, being as certain to us as our pleasure or pain, *i. e.* happiness or misery; beyond which we have no concernment, either of knowing or being. Such an assurance of the existence of *things* without us is sufficient to direct us in the attaining the good and avoiding the evil which is caused by them, which is the important concernment we have of being made acquainted with them.

§. 9. In fine then, when our senses do actually convey into our understandings any *idea*, we cannot but be satisfied that there doth something at that time really exist without us, which doth affect our senses, and by them give notice of itself to our apprehensive faculties, and actually produce that *idea* which we then perceive: and we cannot so far distrust their testimony, as to doubt that such collections of simple *ideas*, as we have observed by our senses to be united together, do really exist together. But *this knowledge extends as far as the present testimony of our senses*, employed about particular objects, that do then affect them, *and no farther*. For if I saw such a collection of simple *ideas* as is wont to be called *man*, existing together one minute since, and am now alone; I cannot be certain that the same man exists now, since there is no necessary connexion of his existence a minute since, with his existence now. By a thousand ways he may cease to be, since I had the testimony of my senses for his existence. And if I cannot be certain that the man I saw last to-day, is now in *being*, I can less be certain that he is so, who hath been longer removed from my senses, and I have not seen since yesterday, or since the last year; and much less can I be certain of the existence of men that I never saw. And therefore, though it be highly probable that millions of men do now exist, yet whilst I am alone writing this, I have not that certainty of it, which we strictly call knowledge; though the great likelihood of it puts me past

But reaches
no farther
than actual
sensation.

doubt, and it be reasonable for me to do several things upon the confidence that there are men (and men also of my acquaintance, with whom I have to do) now in the world: but this is but probability, not knowledge.

Folly to expect demonstration in every thing.

§. 10. Whereby yet we may observe how foolish and vain a thing it is for a man of a narrow knowledge, who having reason given him to judge of the different evidence and probability of things, and to be swayed accordingly; how *vain* I say, it is *to expect demonstration and certainty in things not capable of it*, and refuse assent to very rational propositions, and act contrary to very plain and clear truths, because they cannot be made out so evident, as to surmount every the least (I will not say reason, but) pretence of doubting. He that in the ordinary affairs of life would admit of nothing but direct plain demonstration, would be sure of nothing in this world, but of perishing quickly. The wholesomeness of his meat or drink would not give him reason to venture on it: and I would fain know, what it is he could do upon such grounds, as are capable of no doubt, no objection.

Past existence is known by memory.

§. 11. As, when our senses are actually employed about any object, we do know that it does exist; so *by our memory* we may be assured, that heretofore things that affected our senses have existed. And thus *we have knowledge of the past existence* of several things, whereof our senses having informed us, our memories still retain the *ideas*: and of this we are past all doubt, so long as we remember well. But this knowledge also reaches no farther than our senses have formerly assured us. Thus seeing water at this instant, it is an unquestionable truth to me, that water doth exist: and remembering that I saw it yesterday, it will also be always true, and, as long as my memory retains it, always an undoubted proposition to me, that water did exist the 10th of *July*, 1688; as it will also be equally true, that a
certain

certain number of very fine colours did exist, which, at the same time, I saw upon a bubble of that water: but being now quite out of the sight both of the water and bubbles too, it is no more certainly known to me, that the water doth now exist, than that the bubbles or colours therein do so; it being no more necessary that water should exist to-day, because it existed yesterday, than that the colours or bubbles exist to-day, because they existed yesterday; though it be exceedingly much more probable, because water hath been observed to continue long in existence, but bubbles and the colours on them, quickly cease to be.

§. 12. What *ideas* we have of spirits, and how we come by them, I have already shewn. But though we have those *ideas* in our minds, and know we have them there, the having the *ideas* of spirits does not make us know that any such things do exist without us, or *that there are any finite spirits*, or any other spiritual beings, but the eternal GOD. We have ground from revelation, and several other reasons, to believe with assurance, that there are such creatures; but our senses not being able to discover them, we want the means of knowing their particular existences. For we can no more know that there are finite spirits really existing by the *idea* we have of such beings in our minds, than by the *ideas* any one has of fairies, or centaurs, he can come to know that things answering those *ideas* do really exist.

The existence
of spirits not
knowable.

And therefore concerning the existence of finite spirits, as well as several other things, we must content ourselves with the evidence of faith; but universal certain propositions concerning this matter are beyond our reach. For however true it may be, *v. g.* that all the intelligent spirits that GOD ever created do still exist; yet it can never make a part of our certain knowledge. These, and the like propositions, we may assent to, as highly probable, but are not, I fear, in this state, capable of knowing. We are not then

to

to put others upon demonstrating, nor ourselves upon search of universal certainty in all those matters, wherein we are not capable of any other knowledge, but what our senses give us in this or that particular.

Particular
propositions
concerning
existences are
knowable.

§. 13. By which it appears, that there are two sorts of *propositions*. 1. There is one sort of propositions *concerning the existence* of any thing answerable to such an *idea*; as, having the *idea* of an *elephant*, *phœnix*, *motion*, or an *angle*, in my mind, the first and natural enquiry is, whether such a thing does any where exist? And this knowledge is only of *particulars*. No existence of any thing without us, but only of GOD, can certainly be known farther than our senses inform us. 2. There is no other sort of *propositions*, wherein is expressed the agreement or disagreement of our abstract *ideas*, and their dependence one on another. Such propositions may be *universal* and certain. So having the *idea* of GOD and myself, of fear and obedience, I cannot but be sure that GOD is to be feared and obeyed by me: and this proposition will be certain concerning *man* in general, if I have made an abstract *idea* of such a species, whereof I am one particular. But yet this proposition, how certain soever, That men ought to fear and obey GOD, proves not to me the existence of men in the world, but will be true of all such creatures, whenever they do exist: which *certainty* of such general propositions depends on the agreement or disagreement is to be discovered in those abstract *ideas*.

And general
propositions
concerning ab-
stract *ideas*.

§. 14. In the former case, our knowledge is the consequence of the existence of things producing *ideas* in our minds by our senses; in the latter, knowledge is the consequence of the *ideas* (be they what they will) that are in our minds producing there general certain propositions. Many of these are called *æternæ veritates*, and all of them indeed are so; not from being written all or any of them in the minds of all men, or that they were

were any of them propositions in any one's mind, till he having got the abstract *ideas*, joined or separated them by affirmation or negation. But wheresoever we can suppose such a creature as *man* is, endowed with such faculties, and thereby furnished with such *ideas* as we have, we must conclude he must needs, when he applies his thoughts to the consideration of his *ideas*, know the truth of certain propositions, that will arise from the agreement or disagreement which he will perceive in his own *ideas*. Such propositions are therefore called *eternal truths*, not because they are eternal propositions actually formed, and antecedent to the understanding, that at any time makes them; nor because they are imprinted on the mind from any patterns that are any where of them out of the mind, and existed before: but because being once made about abstract *ideas*, so as to be true, they will, whenever they can be supposed to be made again at any time past or to come, by a mind having those *ideas*, always actually be true. For names being supposed to stand perpetually for the same *ideas*; and the same *ideas* having immutably the same habitudes one to another; propositions concerning any abstract *ideas*, that are once true, must needs be *eternal verities*.

C H A P. XII.

Of the Improvement of our Knowledge.

§. I. **I**T having been the common received opinion amongst men of letters, that *maxims* were the foundation of all knowledge; and that the sciences were each of them built upon certain *præcognita*, from whence the understanding was to take its rise, and by which it was to conduct itself, in its enquiries into the matters belonging to that science; the beaten road of the schools has been to lay down in the beginning one or more general propositions,

Knowledge is not from maxims.

propositions, as foundations whereon to build the knowledge that was to be had of that subject. These doctrines, thus laid down for foundations of any science, were called *principles*, as the beginnings from which we must set out, and look no farther backwards in our enquiries, as we have already observed.

(The occasion
of that opini-
on.)

§. 2. One thing, which might probably give an occasion to this way of proceeding in other sciences, was (as I suppose) the good success it seemed to have in *mathematicks*; wherein men being observed to attain a great certainty of knowledge, these sciences came by pre-eminence to be called *Μαθήματα* and *Μάθησις*, learning, or things learned, thoroughly learned, as having, of all others, the greatest certainty, clearness and evidence in them.

But from the
comparing
clear princi-
ples, and di-
stinct ideas.

§. 3. But, if any one will consider, he will (I guess) find that the *great advancement* and certainty of *real knowledge*, which men arrived to in these sciences, was not owing to the influence of these principles, nor derived from any peculiar advantage they received from two or three general maxims laid down in the beginning; but *from the clear, distinct, complete ideas* their thoughts were employed about, and the relation of equality and excess so clear between some of them, that they had an intuitive knowledge, and by that a way to discover it in others, and this without the help of those *maxims*. For I ask, is it not possible for a young lad to know that his whole body is bigger than his little finger, but by virtue of this axiom, That *the whole is bigger than a part*; nor be assured of it, until he has learned that *maxim*? Or cannot a country wench know, that having received a shilling from one that owes her three, and a shilling also from another that owes her three, that the remaining debts in each of their hands are equal? Cannot she know this, I say, without she fetch the certainty of it from this maxim, That *if you take equals from equals, the remainders will be equal*; a maxim which possibly she never heard or thought of?

I desire any one to consider, from what has been elsewhere said, which is known first and clearest by most people, the particular instance, or the general rule; and which it is that gives life and birth to the other. These general rules are but the comparing our more general and abstract *ideas*, which are the workmanship of the mind, made, and names given to them, for the easier dispatch in its reasonings, and drawing into comprehensive terms, and short rules, its various and multiplied observations. But knowledge began in the mind, and was founded on particulars; though afterwards, perhaps, no notice be taken thereof; it being natural for the mind (forward still to enlarge its knowledge) most attentively to lay up those general notions, and make the proper use of them, which is to disburthen the memory of the cumbersome load of particulars. For I desire it may be considered what more certainty there is to a child, or any one, that his body, little finger and all, is bigger than his little finger alone, after you have given to his body the name *whole*, and to his little finger the name *part*, than he could have had before; or what new knowledge concerning his body can these two relative terms give him, which he could not have without them? Could he not know that his body was bigger than his little finger, if his language were yet so imperfect, that he had no such relative terms as *whole* and *part*? I ask farther, when he has got these names, how is he more certain that his body is a *whole*, and his little finger a *part*, than he was, or might be certain, before he learned those terms, that his body was bigger than his little finger? Any one may as reasonably doubt or deny, that his little finger is a part of his body, as that it is less than his body. And he that can doubt whether it be less, will as certainly doubt whether it be a part. So that the maxim, *The whole is bigger than a part*, can never be made use of to prove the little finger less than the body, but when it is useless, by being brought to convince one of a truth which he knows already. For
he

he that does not certainly know that any parcel of matter, with another parcel of matter joined to it, is bigger than either of them alone, will never be able to know it by the help of these two relative terms, *whole* and *part*, make of them what maxim you please.

Dangerous to
build upon
precarious
principles.

§. 4. But be it in the *mathematicks* as it will, whether it be clearer, that taking an inch from a black line of two inches, and an inch from a red line of two inches, the remaining parts of the two lines will be equal; or that *if you take equals from equals, the remainder will be equal*: which, I say, of these two is the clearer and first known, I leave any one to determine, it not being material to my present occasion. That which I have here to do, is to enquire, whether, if it be the readiest way to knowledge to begin with general maxims, and build upon them, it be yet a safe way to take the *principles*, which are laid down in any other science, as unquestionable truths; and so receive them without examination, and adhere to them, without suffering to be doubted of, because mathematicians have been so happy, or so fair, to use none but self-evident and undeniable. If this be so, I know not what may not pass for truth in morality, what may not be introduced and proved in natural philosophy.

Let that principle of some of the philosophers, That all is matter, and that there is nothing else, be received for certain and indubitable, and it will be easy to be seen by the writings of some that have revived it again in our days, what consequences it will lead us into. Let any one, with *Polemo*, take the world; or, with the *Stoicks*, the *æther*, or the sun; or, with *Anaximenes*, the air to be God; and what a divinity, religion, and worship, must we needs have! *Nothing* can be *so dangerous as principles* thus taken up without questioning or examination; especially if they be such as concern morality, which influence men's lives, and give a bias to all their actions. Who might not justly expect another

kind of life in *Aristippus*, who placed happiness in bodily pleasure; and in *Antisthenes*, who made virtue sufficient to felicity? And he who, with *Plato*, shall place beatitude in the knowledge of God, will have his thoughts raised to other contemplations than those who look not beyond this spot of earth, and those perishing things which are to be had in it. He that, with *Archelaus*, shall lay it down as a principle, That right and wrong, honest and dishonest, are defined only by laws, and not by nature, will have other measures of moral rectitude and pravity, than those who take it for granted, that we are under obligations antecedent to all human constitutions.

§. 5. If therefore those that pass for principles are not certain, (which we must have some way to know, that we may be able to distinguish them from those that are doubtful) but are only made so to us by our blind assent, we are liable to be misled by them; and, instead of being guided into truth, we shall, by principles, be only confirmed in mistake and error.

This is no certain way to truth.

§. 6. But since the knowledge of the certainty of principles, as well as of all other truths, depends only upon the perception we have of the agreement or disagreement of our *ideas*, the way to improve our knowledge is not, I am sure, blindly, and with an implicit faith, to receive and swallow principles; but is, I think, to get and fix in our minds clear, distinct, and compleat ideas, as far as they are to be had, and annex to them proper and constant names. And thus perhaps, without any other principles, but barely considering those *ideas*, and by comparing them one with another, finding their agreement or disagreement, and their several relations and habitudes, we shall get more true and clear knowledge by the conduct of this one rule, than by taking up principles, and thereby putting our minds into the disposal of others.

But to compare clear compleat ideas under steady names.

The true method of advancing knowledge is by considering our abstract ideas.

§. 7. *We must* therefore, if we will proceed as reason advises, *adapt our methods of enquiry to the nature of the ideas we examine*, and the truth we search after. General and certain truths are only founded in the habitudes and relations of abstract ideas. A sagacious and methodical application of our thoughts, for the finding out these relations, is the only way to discover all that can be put with truth and certainty concerning them into general propositions. By what steps we are to proceed in these, is to be learned in the schools of the mathematicians, who from very plain and easy beginnings, by gentle degrees, and a continued chain of reasonings, proceed to the discovery and demonstration of truths that appear at first sight beyond human capacity. The art of finding proofs, and the admirable methods they have invented for the singling out, and laying in order those intermediate ideas that demonstratively shew the equality or inequality of unapplicable quantities, is that which has carried them so far, and produced such wonderful and unexpected discoveries: but whether something like this, in respect of other ideas as well as those of magnitude, may not in time be found out, I will not determine. This, I think, I may say, that if other ideas, that are the real as well as nominal essences of their species, were pursued in the way familiar to mathematicians, they would carry our thoughts farther, and with greater evidence and clearness, than possibly we are apt to imagine.

By which morality also may be made clearer.

§. 8. This gave me the confidence to advance that conjecture which I suggest, chap. 3. §. 18. viz. That *morality is capable of demonstration*, as well as mathematics. For the ideas that ethicks are conversant about, being all real essences, and such as I imagine have a discoverable connexion and agreement one with another; so far as we can find their habitudes and relations, so far we shall be possessed of certain, real, and general

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§. 9. In our search after the knowledge of *substances*, our want of *ideas*, that are suitable to such a way of proceeding, obliges us to a quite different method. We advance not here, as in the other (where our abstract *ideas* are real as well as nominal essences) by contemplating our *ideas*, and considering their relations and correspondencies ; that helps us very little, for the reasons that in another place we have at large set down. By which, I think, it is evident, that substances afford matter of very little general knowledge ; and the bare contemplation of their abstract *ideas* will carry us but a very little way in the search of truth and certainty. What then are we to do for the improvement of our *knowledge in substantial beings* ? Here we are to take a quite contrary course ; the want of *ideas* of their real *essences* sends us from our own thoughts to the things themselves, as they exist. *Experience here must teach me* what reason cannot : and it is by trying alone, that I can certainly know, what other qualities co-exist with those of my complex *idea*, v. g. whether that *yellow, heavy, fusible* body I call *gold*, be *malleable* or no : which experience (which way ever it prove in that particular body I examine) makes me not certain that it is so in all or any other *yellow, heavy, fusible* bodies, but that which I have tried. Because it is no consequence one way or the other from my complex *idea* ; the necessity or inconsistency of *malleability* has no visible connexion with the combination of that *colour, weight, and fusibility* in any body. What I have said here of the nominal essence of *gold*, supposed to consist of a body of such a determinate *colour, weight, and fusibility*, will hold true, if *malleableness, fixedness, and solubility in aqua*

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regia, be added to it. Our reasonings from these *ideas* will carry us but a little way in the certain discovery of the other properties in those masses of matter wherein all these are to be found. Because the other properties of such bodies depending not on these, but on that unknown real essence, on which these also depend, we cannot by them discover the rest: we can go no farther than the simple *ideas* of our nominal essence will carry us, which is very little beyond themselves; and so afford us but very sparingly any certain, universal, and useful truths. For upon trial, having found that particular piece (and all others of that colour, weight, and fusibility, that I ever tried) *malleable*, that also makes now perhaps a part of my complex *idea*, part of my nominal essence of *gold*: whereby, though I make my complex *idea*, to which I affix the name *gold*, to consist of more simple *ideas* than before; yet still, it not containing the real essence of any species of bodies, it helps me not certainly to know (I say, to know, perhaps it may to conjecture) the other remaining properties of that body, farther than they have a visible connexion with some or all of the simple *ideas* that make up my nominal essence. For example: I cannot be certain, from this complex *idea*, whether *gold* be fixed or no; because, as before, there is no necessary connexion or inconsistency to be discovered betwixt a complex *idea* of a body, *yellow, heavy, fusible, malleable*, betwixt these, I say, and *fixedness*; so that I may certainly know, that in whatsoever body these are found, there *fixedness* is sure to be. Here again, for assurance, I must apply myself to *experience*; as far as that reaches, I may have certain knowledge, but no farther.

This may procure us convenience, not science.

§. 10. I deny not, but a man accustomed to rational and regular experiments shall be able to see farther into the nature of bodies, and guess righter at their yet unknown properties, than one that is a stranger to them: but yet, as I have said, this is but judgment and opinion, not knowledge and certainty. This way of getting

ting and improving our knowledge in substances only by experience and history, which is all that the weakness of our faculties in this state of *mediocrity*, which we are in in this world, can attain to, makes me suspect that natural philosophy is not capable of being made a science. We are able, I imagine, to reach very little general knowledge concerning the species of bodies, and their several properties. Experiments and historical observations we may have, from which we may draw advantages of ease and health, and thereby increase our stock of conveniencies for this life; but beyond this I fear our talents reach not, nor are our faculties, as I guess, able to advance.

§. II. From whence it is obvious to conclude, that since our faculties are not fitted to penetrate into the internal fabrick and real essences of bodies, but yet plainly discover to us the being of a GOD, and the knowledge of ourselves, enough to lead us into a full and clear discovery of our duty, and great concernment, it will become us, as rational creatures, to employ those faculties we have, about what they are most adapted to, and follow the direction of nature, where it seems to point us out the way. For it is rational to conclude, that our proper employment lies in those enquiries, and in that sort of knowledge which is most suited to our natural capacities, and carries in it our greatest interest, *i. e.* the condition of our eternal estate. Hence I think I may conclude, that *mortality is the proper science and business of mankind in general*, (who are both concerned and fitted to search out their *summum bonum*) as several arts, conversant about several parts of nature, are the lot and private talent of particular men, for the common use of human life, and their own particular subsistence in this world. Of what consequence the discovery of one natural body and its properties may be to human life, the whole great Continent of *America* is a convincing instance; whose ignorance in useful arts, and want of the greatest part of the conveniences of life, in a country

We are fitted
for moral
knowledge
and natural
improvements.

that abounded with all sorts of natural plenty, I think, may be attributed to their ignorance of what was to be found in a very ordinary despicable stone, I mean the mineral of *iron*. And whatever we think of our parts or improvements in this part of the world, where knowledge and plenty seem to vie with each other; yet, to any one that will seriously reflect on it, I suppose it will appear past doubt, that were the use of *iron* lost among us, we should in a few ages be unavoidably reduced to the wants and ignorance of the ancient savage *Americans*, whose natural endowments and provisions come no way short of those of the most flourishing and polite nations; so that he who first made known the use of that one contemptible mineral, may be truly stiled the father of arts, and author of plenty.

But must beware of hypotheses, and wrong principles.

§. 12. I would not therefore be thought to disesteem, or *dissuade from the study of nature*. I readily agree the contemplation of his works gives us occasion to admire, revere, and glorify their author; and, if rightly directed, may be of greater benefit to mankind, than the monuments of exemplary charity, that have, at so great charge, been raised by the founders of hospitals and alms-houses. He that first invented printing, discovered the use of the compass, or made public the virtue and right use of *kin kina*, did more for the propagation of knowledge, for the supplying and increase of useful commodities, and saved more from the grave, than those who built colleges, work-houses, and hospitals. All that I would say, is, that we should not be too forwardly possessed with the opinion or expectation of knowledge, where it is not to be had, or by ways that will not attain to it: that we should not take doubtful systems for compleat sciences; nor unintelligible notions for scientific demonstrations. In the knowledge of bodies, we must be content to glean what we can from particular experiments; since we cannot, from a discovery of their real essences, grasp at a time whole sheaves; and in bundles comprehend

prehend the nature and properties of whole species together. Where our enquiry is concerning co-existence, or repugnancy to co-exist, which by contemplation of our *ideas* we cannot discover, there experience, observation, and natural history, must give us by our senses, and by retail, an insight into corporeal substances. The knowledge of bodies we must get by our senses, warily employed in taking notice of their qualities and operations on one another: and what we hope to know of separate spirits in this world, we must, I think, expect only from revelation. He that shall consider *how little general maxims, precarious principles, and hypotheses laid down at pleasure, have promoted true knowledge*, or helped to satisfy the enquiries of rational men after real improvements; how little, I say, the setting out at that end has for many ages together advanced men's progress towards the knowledge of natural philosophy, will think we have reason to thank those, who in this latter age have taken another course, and have trod out to us, though not an easier way to learned ignorance, yet a surer way to profitable knowledge.

§. 13. Not that we may not, to explain any *phenomena* of nature, make use of any probable *hypothesis* whatsoever. *Hypotheses*, if they are well made, are at least great helps to the memory, and often direct us to new discoveries. But my meaning is, that we should *not take up any one too hastily*, (which the mind, that would always penetrate into the causes of things, and have principles to rest on, is very apt to do) till we have very well examined particulars, and made several experiments in that thing which we would explain by our hypothesis, and see whether it will agree to them all; whether our principles will carry us quite through, and not be as inconsistent with one *phenomenon* of nature, as they seem to accommodate and explain another. And at least that we take care that the name of *principles* deceive us not, nor impose on us, by making us receive

The true use
of hypotheses.

that for an unquestionable truth, which is really at best but a very doubtful conjecture, such as are most (I had almost said all) of the *hypotheses* in natural philosophy.

Clear and distinct *ideas*, with settled names, and the finding of those which shew their agreement or disagreement, are the ways to enlarge our knowledge.

§. 14. But whether natural philosophy be capable of certainty or no, the *ways to enlarge our knowledge*, as far as we are capable, seem to me, in short, to be these two :

First, The *first* is to get and settle in our minds determined *ideas* of those things; whereof we have general or specifick names; at least of so many of them, as we would consider and improve our knowledge in, or reason about. And if they be *specifick ideas* of *substances*, we should endeavour also to make them as compleat as we can; whereby I mean, that we should put together as many simple *ideas*, as, being constantly observed to co-exist, may perfectly determine the *species*; and each of those simple *ideas*, which are the ingredients of our complex one, should be clear and distinct in our minds: for it being evident that our knowledge cannot exceed our *ideas*, as far as they are either imperfect, confused, or obscure, we cannot expect to have certain, perfect, or clear knowledge.

Secondly, The other is the art of *finding out* those *intermediate ideas*, which may shew us the agreement or repugnancy of other *ideas*, which cannot be immediately compared.

Mathematicks
an instance of
it.

§. 15. That these two (and not the relying on maxims, and drawing consequences from some general propositions) are the right method of improving our knowledge in the *ideas* of other modes besides those of quantity, the consideration of mathematical knowledge will easily inform us. Where first we shall find, that he that has not a perfect and clear *idea* of those angles or figures, of which he desires to know any thing, is utterly thereby incapable of any knowledge about them.

Suppose

Suppose but a man not to have a perfect exact *idea* of a *right angle*, a *scalenum* or *trapezium*, and there is nothing more certain, than that he will in vain seek any demonstration about them. Farther, it is evident, that it was not the influence of those maxims which are taken for principles in mathematicks, that hath led the masters of that science into those wonderful discoveries they have made. Let a man of good parts know all the maxims generally made use of in mathematicks never so perfectly, and contemplate their extent and consequences as much as he pleases, he will, by their assistance, I suppose, scarce ever come to know, that the *square of the hypotenuse in a right-angled triangle, is equal to the squares of the two other sides*. The knowledge that *the whole is equal to all its parts, and if you take equals from equals, the remainder will be equal*, &c. helped him not, I presume, to this demonstration: and a man may, I think, pore long enough on those axioms, without ever seeing one jot the more of mathematical truths. They have been discovered by the thoughts otherwise applied; the mind had other objects, other views before it, far different from those maxims, when it first got the knowledge of such kind of truths in mathematicks, which men well enough acquainted with those received axioms, but ignorant of their method who first made these demonstrations, can never sufficiently admire. And who knows what methods, to enlarge our knowledge in other parts of science, may hereafter be invented, answering that of *algebra* in mathematicks, which so readily finds out *ideas* of quantities to measure others by, whose equality or proportion we could otherwise very hardly, or perhaps never come to know?

C H A P. XIII.

Some farther Considerations concerning our Knowledge.

Our know-
ledge partly
necessary,
partly volun-
tary.

§. 1. OUR knowledge, as in other things, so in this, has a great conformity with our sight, that it is neither *wholly necessary*, nor *wholly voluntary*.

If our knowledge were altogether necessary, all men's knowledge would not only be alike, but every man would know all that is knowable; and if it were wholly voluntary, some men so little regard or value it, that they would have extreme little, or none at all. Men that have senses cannot chuse but receive some *ideas* by them, and if they have memory, they cannot but retain some of them; and if they have any distinguishing faculty, cannot but perceive the agreement or disagreement of some of them one with another; as he that has eyes, if he will open them by day, cannot but see some objects, and perceive a difference in them. But though a man with his eyes open in the light cannot but see; yet there be certain objects, which he may chuse whether he will turn his eyes to; there may be in his reach a book containing pictures and discourses capable to delight and instruct him, which yet he may never have the will to open, never take the pains to look into.

The applica-
tion volun-
tary; but we
know as
things are,
not as we
please.

§. 2. There is also another thing in a man's power, and that is, though he turns his eyes sometimes towards an object, yet he may chuse whether he will curiously survey it, and with an intent application endeavour to observe accurately all that is visible in it. But yet, what he does see, he cannot see otherwise than he does. It depends not on his will to see that *black* which appears *yellow*; nor to persuade himself, that what actually *scalds* him, feels *cold*: the earth will not appear painted with flowers, nor the fields covered with verdure, whenever he has

a mind

a mind to it : in the cold winter, he cannot help seeing it white and hoary, if he will look abroad. Just thus is it with our understanding ; all that is *voluntary* in our knowledge, is the *employing*, or with-holding any of *our faculties* from this or that sort of objects, and a more or less accurate survey of them ; but they being employed, *our will hath no power to determine the knowledge of the mind* one way or other ; that is done only by the objects themselves, as far as they are clearly discovered. And therefore, as far as men's senses are conversant about external objects, the mind cannot but receive those *ideas* which are presented by them, and be informed of the existence of things without ; and so far as men's thoughts converse with their own determined *ideas*, they cannot but, in some measure, observe the agreement and disagreement that is to be found amongst some of them, which is so far knowledge : and if they have names for those *ideas* which they have thus considered, they must needs be assured of the truth of those propositions, which express that agreement or disagreement they perceive in them, and be undoubtedly convinced of those truths. For what a man sees, he cannot but see ; and what he perceives, he cannot but know that he perceives.

§. 3. Thus he that has got the *ideas* of numbers, and hath taken the pains to compare *one, two, and three, to six*, cannot chuse but know that they are equal. He that hath got the *idea* of a triangle, and found the ways to measure its angles, and their magnitudes, is certain that its three angles are equal to two right ones : and can as little doubt of that, as of this truth, that *it is impossible for the same thing to be, and not to be.*

Instance in numbers.

He also that hath the *idea* of an intelligent, but frail and weak being, made by and depending on another, who is eternal, omnipotent, perfectly wise and good, will as certainly know that man is to honour, fear, and obey GOD, as that the sun shines when he sees it. For, if he

In natural religion.

he hath but the *ideas* of two such beings in his mind, and will turn his thoughts that way, and consider them, he will as certainly find, that the inferior, finite, and dependent, is under an obligation to obey the supreme and infinite, as he is certain to find, that *three*, *four* and *seven*, are less than *fifteen*, if he will consider and compute those numbers; nor can he be surer in a clear morning that the sun is risen, if he will but open his eyes, and turn them that way. But yet these truths being never so certain, never so clear, he may be ignorant of either, or all of them, who will never take the pains to employ his faculties as he should, to inform himself about them.

C H A P. XIV.

Of Judgment.

Our know-
ledge being
short, we want
something
else.

§. 1. **T**HE understanding faculties being given to man, not barely for speculation, but also for the conduct of his life, man would be at a great loss, if he had nothing to direct him, but what has the certainty of true *knowledge*. For that being very short and scanty, as we have seen, he would be often utterly in the dark, and in most of the actions of his life perfectly at a stand, had he nothing to guide him in the absence of clear and certain knowledge. He that will not eat, till he has demonstration that it will nourish him; he that will not stir, till he infallibly knows the business he goes about will succeed, will have little else to do, but sit still and perish.

What use to
be made of this
twilight
state.

§. 2. Therefore, as God has set some things in broad day-light, as he has given us some certain knowledge, though limited to a few things in comparison, probably as a taste of what intellectual creatures are capable of, to excite in us a desire and endeavour after a better state;

state; so, in the greatest part of our concernment, he has afforded us only the twilight, as I may so say, of probability, fuitable, I presume, to that state of mediocrity and probationership, he has been pleased to place us in here; wherein, to check our over-confidence and presumption, we might, by every day's experience, be made sensible of our short-sightedness, and liableness to error; the sense whereof might be a constant admonition to us, to spend the days of this our pilgrimage with industry and care, in the search, and following of that way, which might lead us to a state of greater perfection. It being highly rational to think, even were revelation silent in the case, that as men employ those talents God has given them here, they shall accordingly receive their rewards at the close of the day, when their sun shall set, and night shall put an end to their labours.

§. 3. The faculty which God has given man to supply the want of clear and certain knowledge, in cases where that cannot be had, is *judgment*: whereby the mind takes its *ideas* to agree or disagree, or, which is the same, any proposition to be true or false, without perceiving a demonstrative evidence in the proofs. The mind sometimes exercises this judgment out of necessity, where demonstrative proofs and certain knowledge are not to be had; and sometimes out of laziness, unskilfulness, or haste, even where demonstrative and certain proofs are to be had. Men often stay not warily to examine the agreement or disagreement of two *ideas*, which they are desirous or concerned to know; but, either incapable of such attention as is requisite in a long train of gradations, or impatient of delay, lightly cast their eyes on, or wholly pass by the proofs; and so, without making out the demonstration, determine of the agreement or disagreement of two *ideas*, as it were by a view of them as they are at a distance, and take it to be the one or the other, as seems most likely to them upon such a loose survey. This faculty of the mind, when it is exercised immediately about things,

Judgment supplies the want of knowledge.

is

is called *judgment*: when about truths delivered in words, is most commonly called *assent* or *dissent*: which being the most usual way wherein the mind has occasion to employ this faculty, I shall, under these terms, treat of it as least liable in our language to equivocation.

Judgment is the presuming things to be so, without perceiving it.

§. 4. Thus the mind has two faculties conversant about truth and falsehood.

First, Knowledge, whereby it certainly perceives, and is undoubtedly satisfied of the agreement or disagreement of any *ideas*.

Secondly, Judgment, which is the putting *ideas* together, or separating them from one another in the mind, when their certain agreement or disagreement is not perceived, but presumed to be so; which is, as the word imports, taken to be so, before it certainly appears. And if it so unites or separates them, as in reality things are, it is *right judgment*.

C H A P. XV.

Of Probability.

Probability is the appearance of agreement upon fallible proofs.

§. 1. **A**S demonstration is the shewing the agreement or disagreement of two *ideas*, by the intervention of one or more proofs, which have a constant, immutable, and visible connexion one with another; so probability is nothing but the appearance of such an agreement or disagreement, by the intervention of proofs, whose connexion is not constant and immutable, or at least is not perceived to be so, but is, or appears, for the most part to be so, and is enough to induce the mind to *judge* the proposition to be true or false, rather than the contrary. For example: in the demonstration of it, a man perceives the certain immutable connexion there is of equality between the three angles of a triangle, and those

those intermediate ones which are made use of to shew their equality to two right ones; and so, by an intuitive knowledge of the agreement or disagreement of the intermediate *ideas* in each step of the progress, the whole series is continued with an evidence, which clearly shews the agreement or disagreement of those three angles in equality to two right ones: and thus he has certain knowledge that it is so. But another man, who never took the pains to observe the demonstration, hearing a mathematician, a man of credit, affirm the three angles of a triangle to be equal to two right ones, *assents* to it, *i. e.* receives it for true. In which case, the foundation of his assent is the probability of the thing, the proof being such as for the most part carries truth with it: the man, on whose testimony he receives it, not being wont to affirm any thing contrary to, or besides his knowledge, especially in *matters* of this kind. So that that which causes his assent to this proposition, that the three angles of a triangle are equal to two right ones, that which makes him take these *ideas* to agree, without knowing them to do so, is the wonted veracity of the speaker in other cases, or his supposed veracity in this.

§. 2. Our knowledge, as has been shewn, being very narrow, and we not happy enough to find certain truth in every thing which we have occasion to consider, most of the propositions we think, reason, discourse, say, act upon, are such as we cannot have undoubted knowledge of their truth; yet some of them border so near upon certainty, that we make no doubt at all about them, but assent to them as firmly, and act, according to that assent, as resolutely, as if they were infallibly demonstrated, and that our knowledge of them was perfect and certain. But there being degrees herein, from the very neighbourhood of certainty and demonstration, quite down to improbability and unlikeliness, even to the confines of impossibility; and also degrees of *assent* from full *assurance* and *confidence*, quite down to *conjecture*, *doubt*, and *distrust*; I shall come now (having,

It is to supply the want of knowledge.

as I think, found out the bounds of human knowledge and certainty) in the next place, to consider *the several degrees and grounds of probability, and assent or faith.*

Being that which makes us presume things to be true before we know them to be so.

§. 3. *Probability* is likeliness to be true; the very notation of the word signifying such a proposition, for which there be arguments or proofs to make it pass or be received for true. The entertainment the mind gives this sort of propositions, is called *belief, assent, or opinion*, which is the admitting or receiving any proposition for true, upon arguments or proofs that are found to persuade us to receive it as true, without certain knowledge that it is so. And herein lies the *difference between probability and certainty, faith and knowledge*, that in all the parts of knowledge there is intuition; each immediate *idea*, each step has its visible and certain connexion; in belief not so. That which makes me believe, is something extraneous to the thing I believe; something not evidently joined on both sides to, and so not manifestly shewing the agreement or disagreement of those *ideas* that are under consideration.

The grounds of probability are two; conformity with our own experience, or the testimony of others experience.

§. 4. *Probability* then, being to supply the defect of our knowledge, and to guide us where that fails, is always conversant about propositions whereof we have no certainty, but only some inducements to receive them for true. The *grounds of it* are, in short, these *two* following.

First, The conformity of any thing with our own knowledge, observation, and experience.

Secondly, The testimony of others, vouching their observation and experience. In the testimony of others, is to be considered, 1. The number. 2. The integrity. 3. The skill of the witnesses. 4. The design of the author, where it is a testimony out of a book cited. 5. The consistency of the parts and circumstances of the relation. 6. Contrary testimonies.

§. 5. Probability wanting that intuitive evidence which infallibly determines the understanding, and produces certain knowledge, the *mind*, if it would proceed rationally, ought to examine all the grounds of probability, and see how they make more or less for or against, any proposition, before it assents to, or dissents from it, and, upon a due balancing the whole, reject or receive it, with a more or less firm assent, proportionably to the preponderancy of the greater grounds of probability on one side or the other. For example:

In this, all the arguments *pro* and *con*, ought to be examined, before we come to a judgment.

If I myself see a man walk on the ice, it is past probability, it is knowledge: but if another tells me he saw a man in *England*, in the midst of a sharp winter, walk upon water hardened with cold; this has so great conformity with what is usually observed to happen, that I am disposed, by the nature of the thing itself, to assent to it, unless some manifest suspicion attend the relation of that matter of fact. But if the same thing be told to one born between the tropicks, who never saw nor heard of any such thing before, there the whole probability relies on testimony: and as the relators are more in number, and of more credit, and have no interest to speak contrary to the truth; so that *matter* of fact is like to find more or less belief. Though to a man whose experience has been always quite contrary, and who has never heard of any thing like it, the most untainted credit of a witness will scarce be able to find belief. As it happened to a *Dutch* Ambassador, who entertaining the King of *Siam* with the particularities of *Holland*, which he was inquisitive after, amongst other things told him, that the water in his country would sometimes in cold weather, be so hard that men walked upon it, and that it would bear an elephant, if he were there. To which the King replied, *hitherto I have believed the strange things you have told me, because I look upon you as a sober fair man; but now I am sure you lye.*

§. 6.

They being
capable of
great variety.

§. 6. Upon these grounds depends the *probability* of any proposition: and as the conformity of our knowledge, as the certainty of observations, as the frequency and constancy of experience, and the number and credibility of testimonies, do more or less agree or disagree with it, so is any proposition, in itself, more or less probable. There is another, I confess, which, though by itself it be no true ground of probability, yet is often made use of for one, by which men most commonly regulate their assent, and upon which they pin their faith more than any thing else, and that is *the opinion of others*: though there cannot be a more dangerous thing to rely on, nor more likely to mislead one, since there is much more falshood and error among men, than truth and knowledge. And if the opinions and persuasions of others, whom we know and think well of, be a ground of assent, men have reason to be Heathens in *Japan*, Mahometans in *Turky*, Papists in *Spain*, Protestants in *England*, and Lutherans in *Sweden*. But of this wrong ground of assent I shall have occasion to speak more at large in another place.

C H A P. XVI.

Of the Degrees of Assent.

Our assent
ought to be re-
gulated by the
grounds of
probability.

§. 1. **T**HE grounds of probability we have laid down in the foregoing chapter; as they are the foundations on which our *assent* is built, so are they also the measure whereby its several degrees are, or ought to be *regulated*: only we are to take notice, that whatever grounds of probability there may be, they yet operate no farther on the mind, which searches after truth, and endeavours to judge right, than they appear, at least in the first judgment or search that the mind makes. I confess, in the opinions men have, and firmly stick to, in the world, their

their *assent* is not always from an actual view of the reasons that at first prevailed with them; it being in many cases almost impossible, and in most very hard, even for those who have very admirable memories, to retain all the proofs, which, upon a due examination, made them embrace that side of the question. It suffices that they have once with care and fairness sifted the matter as far as they could; and that they have searched into all the particulars that they could imagine to give any light to the question, and, with the best of their skill, cast up the account upon the whole evidence: and thus having once found on which side the probability appeared to them, after as full and exact an enquiry as they can make, they lay up the conclusion in their memories, as a truth they have discovered; and for the future they remain satisfied with the testimony of their memories, that this is the opinion, that, by the proofs they have once seen of it, deserves such a *degree* of their *assent* as they afford it.

§. 2. This is all that the greatest part of men are capable of doing, in regulating their opinions and judgments, unless a man will exact of them, either to retain distinctly in their memories all the proofs concerning any probable truth, and that too in the same order and regular deduction of consequences, in which they have formerly placed or seen them; which sometimes is enough to fill a large volume upon one single question: or else they must require a man, for every opinion that he embraces, every day to examine the proofs; both which are impossible. It is unavoidable therefore, that the memory be relied on in the case, and that *men be persuaded of several opinions, whereof the proofs are not actually in their thoughts*; nay, which perhaps they are not able actually to recall. Without this, the greatest part of men must be either very scepticks, or change every moment, and yield themselves up to whoever, having lately studied

These cannot always be actually in view, and then we must content ourselves with the remembrance that we once saw ground for such a degree of assent.

the question, offers them arguments, which, for want of memory, they are not able presently to answer.

The ill consequence of this, if our former judgment were not rightly made.

§. 3. I cannot but own, that men's *sticking* to their *past judgment*, and adhering firmly to conclusions formerly made, is often the cause of great obstinacy in error and mistake. But the fault is not that they rely on their memories for what they have before well judged, but because they judged before they had well examined. May we not find a great number (not to say the greatest part) of men, that think they have formed right judgments of several *matters*, and that for no other reason but because they never thought otherwise? Who imagine themselves to have judged right, only because they never questioned, never examined, their own opinions? Which is indeed to think they judged right, because they never judged at all: and yet these of all men hold their opinions with the greatest stiffness; those being generally the most fierce and firm in their tenets, who have least examined them. What we once know, we are certain is so; and we may be secure, that there are no latent proofs undiscovered, which may overturn our knowledge, or bring it in doubt. But, in *matters* of probability, it is not in every case we can be sure that we have all the particulars before us, that any way concern the question; and that there is no evidence behind, and yet unseen, which may cast the probability on the other side, and outweigh all that at present seems to preponderate with us. Who almost is there that hath the leisure, patience, and means to collect together all the proofs concerning most of the opinions he has, so as safely to conclude, that he hath a clear and full view, and that there is no more to be alledged for his better information? And yet we are forced to determine ourselves on the one side or other. The conduct of our lives, and the management of our great concerns, will not bear delay; for those depend, for the most part, on the determination of our judgment in points wherein we are not capable

certain and demonstrative knowledge, and wherein it is necessary for us to embrace the one side or the other.

§. 4. Since therefore it is unavoidable to the greatest part of men, if not all, to have several *opinions*, without certain and indubitable proofs of their truth; and it carries too great an imputation of ignorance, lightness, or folly, for men to quit and renounce their former tenets presently upon the offer of an argument which they cannot immediately answer, and shew the insufficiency of: it would methinks become all men to maintain *peace*, and the common offices of humanity and friendship, in the diversity of opinions, since we cannot reasonably expect, that any one should readily and obsequiously quit his own opinion, and embrace ours, with a blind resignation to an authority which the understanding of man acknowledges not. For, however it may often mistake, it can own no other guide but reason, nor blindly submit to the will and dictates of another. If he you would bring over to your sentiments, be one that examines before he assents, you must give him leave at his leisure to go over the account again, and recalling what is out of his mind, examine all the particulars, to see on which side the advantage lies; and if he will not think our arguments of weight enough to engage him anew in so much pains, it is but what we do often ourselves in the like case; and we should take it amiss, if others should prescribe to us what points we should study: and if he be one who takes his opinions upon trust, how can we imagine that he should renounce those tenets, which time and custom have so settled in his mind, that he thinks them self-evident, and of an unquestionable certainty; or which he takes to be impressions he has received from GOD himself, or from men sent by him? How can we expect, I say, that opinions thus settled, should be given up to the arguments or authority of a stranger or adversary, especially if there be any suspicion of in-

The right use of it, is mutual charity and forbearance.

terest or design, as there never fails to be where men find themselves ill treated? We should do well to commiserate our mutual ignorance, and endeavour to remove it in all the gentle and fair ways of information, and not instantly treat others ill, as obstinate and perverse, because they will not renounce their own, and receive our opinions, or at least those we would force upon them, when it is more than probable that we are no less obstinate in not embracing some of theirs. For where is the man that has uncontested evidence of the truth of all that he holds, or of the falsehood of all he condemns; or can say, that he has examined to the bottom all his own, or other men's opinions? The necessity of believing, without knowledge, nay often upon very slight grounds, in this fleeting state of action and blindness we are in, should make us more busy and careful to inform ourselves, than constrain others; at least those who have not thoroughly examined to the bottom all their own tenets, must confess they are unfit to prescribe to others, and are unreasonable in imposing that as truth on other men's belief, which they themselves have not searched into, nor weighed the arguments of probability on which they should receive or reject it. Those who have fairly and truly examined, and are thereby got past doubt in all the doctrines they profess, and govern themselves by, would have a juster pretence to require others to follow them: but these are so few in number, and find so little reason to be magisterial in their opinions, that nothing insolent and imperious is to be expected from them: and there is reason to think, that if men were better instructed themselves, they would be less imposing on others.

Probability is either of matter of fact, or speculation.

5. But to return to the grounds of assent, and the several degrees of it, we are to take notice, that the propositions we receive upon inducements of *probability* are of *two sorts*, either concerning some particular existence, or, as it is usually termed, matter of fact, which,

which, falling under observation, is capable of human testimony; or else concerning things, which, being beyond the discovery of our senses, are not capable of any such testimony.

§. 6. Concerning the *first* of these, viz. *particular of matter of fact.*

First, Where any particular thing, consonant to the constant observation of ourselves and others in the like case, comes attested by the concurrent reports of all that mention it, we receive it as easily, and build as firmly upon it, as if it were certain knowledge; and we reason and act thereupon with as little doubt, as if it were perfect demonstration. Thus, if all *Englishmen*, who have occasion to mention it, should affirm that it froze in *England* the last winter, or that there were swallows seen there in the summer, I think a man could almost as little doubt of it, as that seven and four are eleven. The first, therefore, and highest degree of probability, is, when the general consent of all men, in all ages, as far as it can be known, concurs with a man's constant and never-failing experience in like cases, to confirm the truth of any particular matter of fact attested by fair witnesses; such are all the stated constitutions and properties of bodies, and the regular proceedings of causes and effects in the ordinary course of nature. This we call an argument from the nature of things themselves: for what our own and other men's constant observation has found always to be after the same manner, that we with reason conclude to be the effects of steady and regular causes, though they come not within the reach of our knowledge. Thus, that fire warmed a man, made lead fluid, and changed the colour or consistency in wood or charcoal; that iron sunk in water and swam in quicksilver: these, and the like propositions about particular facts, being agreeable to our constant experience, as often as we have to do with these matters, and being generally spoke of (when mentioned by

The concurrent experience of all other men with ours, produces assurance approaching to knowledge.

others) as things found constantly to be so, and therefore not so much as controverted by any body, we are put past doubt, that a relation affirming any such thing to have been, or any predication that it will happen again in the same manner, is very true. These *probabilities* rise so near to *certainty*, that they govern our thoughts as absolutely, and influence all our actions as fully, as the most evident demonstration; and in what concerns us, we make little or no difference between them and certain knowledge. Our belief thus grounded rises to assurance.

Unquestionable testimony and experience for the most part produce confidence.

§. 7. *Secondly*, The next degree of *probability* is, when I find by my own experience, and the agreement of all others that mention it, a thing to be for the most part so; and that the particular instance of it is attested by many and undoubted witnesses, v. g. History giving us such an account of men in all ages, and my own experience, as far as I had an opportunity to observe, confirming it, that most men prefer their private advantage to the public; if all historians that write of *Tiberius*, say that *Tiberius* did so, it is extremely probable. And in this case, our assent has a sufficient foundation to raise itself to a degree which we may call *confidence*.

Fair testimony, and the nature of the thing indifferent, produces also confident belief.

§. 8. *Thirdly*, In things that happen indifferently, as that a bird should fly this or that way, that it should thunder on a man's right or left-hand, &c. when any particular *matter* of fact is vouched by the concurrent testimony of unsuspected witnesses, there our assent is also unavoidable. Thus, that there is such a city in *Italy* as *Rome*; that about 1700 years ago there lived in it a man called *Julius Cesar*; that he was a general, and that he won a battle against another called *Pompey*: this, though in the nature of the thing there be nothing for nor against it, yet being related by historians of credit, and contradicted by no one writer, a man cannot avoid believing

lieving it, and can as little doubt of it, as he does of the being and actions of his own acquaintance, whereof he himself is a witness.

§. 9. Thus far the *matter* goes easy enough. Probability upon such grounds carries so much evidence with it, that it naturally determines the judgment, and leaves us as little liberty to believe or disbelieve, as a demonstration does, whether we will know or be ignorant. The difficulty is, when testimonies contradict common experience, and the reports of history and witnesses clash with the ordinary course of nature, or with one another; there it is, where diligence, attention and exactness is required to form a right judgment, and to proportion the *assent* to the different evidence and probability of the thing, which rises and falls according as those two foundations of credibility, *viz.* common observation in like cases, and particular testimonies in that particular instance, favour or contradict it. These are liable to so great variety of contrary observations, circumstances, reports, different qualifications, tempers, designs, oversights, &c. of the reporters, that it is impossible to reduce to precise rules the various degrees wherein men give their assent. This only may be said in general, that as the arguments and proofs, *pro* and *con*, upon due examination, nicely weighing every particular circumstance, shall to any one appear, upon the whole *matter*, in a greater or less degree to preponderate on either side, so they are fitted to produce in the mind such different entertaintment, as we call *belief*, *conjecture*, *guess*, *doubt*, *wavering*, *distrust*, *disbelief*, &c.

Experience and testimonies clashing, infinitely vary the degrees of probability.

§. 10. This is what concerns *assent* in *matters* wherein testimony is made use of; concerning which, I think it may not be amiss to take notice of a rule observed in the law of *England*, which is, that though the attested copy of a record be good proof, yet the copy of a copy never so well attested, and by

Traditional testimonies, the farther removed, the less their proof.

never so credible witnesses, will not be admitted as a proof in judicature. This is so generally approved as reasonable, and suited to the wisdom and caution to be used in our enquiry after material truths, that I never yet heard of any one that blamed it. This practice, if it be allowable in the decisions of right and wrong, carries this observation along with it, *viz.* that any testimony, the farther off it is from the original truth, the less force and proof it has. The being and existence of the thing itself is what I call the original truth. A credible man vouching his knowledge of it, is a good proof: but if another equally credible do witness it from his report, the testimony is weaker; and a third that attests the hear-say of an hear-say, is yet less considerable. So that, *in traditional truths, each remove weakens the force of the proof*; and the more hands the tradition has successively passed through, the less strength and evidence does it receive from them. This I thought necessary to be taken notice of, because I find amongst some men the quite contrary commonly practised, who look on opinions to gain force by growing older; and what a thousand years since would not, to a rational man, cotemporary with the first voucher, have appeared at all probable, is now urged as certain beyond all question, only because several have since, from him, said it one after another. Upon this ground, propositions evidently false or doubtful enough in their first beginning, come by an inverted rule of probability to pass for authentic truths; and those which found or deserved little credit from the mouths of their first authors, are thought to grow venerable by age, and are urged as undeniable.

Yet history is
of great use.

§. II. I would not be thought here to lessen the credit and use of history: it is all the light we have in many cases; and we receive from it a great part of the useful truths we have, with a convincing evidence. I think nothing more valuable than the records of antiquity: I wish

we

we had more of them, and more uncorrupted. But this truth itself forces me to say, that no *probability* can rise higher than its first original. What has no other evidence than the single testimony of one only witness, must stand or fall by his only testimony, whether good, bad, or indifferent; and though cited afterwards by hundreds of others, one after another, is so far from receiving any strength thereby, that it is only the weaker. Passion, interest, inadvertency, mistake of his meaning, and a thousand odd reasons or capricious men's minds are acted by, (impossible to be discovered) may make one man quote another man's words or meaning wrong. He that has but ever so little examined the citations of writers cannot doubt how little credit the quotations deserve, where the originals are wanting; and consequently how much less quotations of quotations can be relied on. This is certain, that what in one age was affirmed upon slight grounds, can never after come to be more valid in future ages, by being often repeated. But the farther still it is from the original, the less valid it is, and has always less force in the mouth or writing of him that last made use of it, than in his from whom he received it.

§. 12. The probabilities we have hitherto mentioned, are only such as concern matter of fact, and such things as are capable of observation and testimony. There remains that other sort, concerning which men entertain opinions with variety of assent, though the things be such, that *falling not under the reach of our senses, they are not capable of testimony*. Such are, 1. The existence, nature, and operations of finite immaterial beings, without us; as spirits, angels, devils, &c. or the existence of material beings, which either for their smallness in themselves, or remoteness from us, our senses cannot take notice of; as whether there be any plants, animals, and intelligent inhabitants in the planets, and other mansions of the

In things which sense cannot discover, analogy is the great rule of probability.

the vast universe. 2. Concerning the manner of operation in most parts of the works of nature; wherein, though we see the sensible effects, yet their causes are unknown, and we perceive not the ways and manner how they are produced. We see animals are generated, nourished, and move: the loadstone draws iron; and the parts of a candle successively melting, turn into flame, and give us both light and heat. These and the like effects we see and know; but the causes that operate, and the manner they are produced in, we can only guess, and probably conjecture. For these, and the like, coming not within the scrutiny of human senses, cannot be examined by them, or be attested by any body, and therefore can appear more or less probable, only as they more or less agree to truths that are established in our minds, and as they hold proportion to other parts of our knowledge and observation. *Analogy* in these matters is the only help we have, and it is from that alone we draw all our grounds of probability. Thus, observing that the bare rubbing of two bodies violently one upon another produces heat, and very often fire itself, we have reason to think, that what we call heat and fire consists in a violent agitation of the imperceptible minute parts of the burning matter: observing likewise, that the different refractions of pellucid bodies produce in our eyes the different appearances of several colours; and also that the different ranging and laying the superficial parts of several bodies, as of velvet, watered silk, &c. does the like, we think it probable that the colour and shining of bodies is in them nothing but the different arrangement and refraction of their minute and insensible parts. Thus finding in all parts of the creation, that fall under human observation, that there is a gradual connexion of one with another, without any great or discernible gaps between, in all that great variety of things we see in the world, which are so closely linked together, that, in the several ranks of beings, it is not easy to discover the bounds betwixt them,

them, we have reason to be persuaded, that by such gentle steps things ascend upwards in degrees of perfection. It is a hard matter to say where sensible and rational begin, and where insensible and irrational end: and who is there quick-sighted enough to determine precisely, which is the lowest species of living things, and which the first of those which have no life? Things, as far as we can observe, lessen and augment, as the quantity does in a regular cone, where, though there be a manifest odds betwixt the bigness of the diameter at a remote distance, yet the difference between the upper and under, where they touch one another, is hardly discernible. The difference is exceeding great between some men and some animals; but if we will compare the understanding and abilities of some men and some brutes, we shall find so little difference, that it will be hard to say, that that of the man is either clearer or larger. Observing, I say, such gradual and gentle descents downwards in those parts of the creation that are beneath man, the rule of analogy may make it probable, that it is so also in things above us and our observation; and that there are several ranks of intelligent beings, excelling us in several degrees of perfection, ascending upwards towards the infinite perfection of the Creator, by gentle steps and differences, that are every one at no great distance from the next to it. This sort of probability, which is the best conduct of rational experiments, and the rise of hypothesis, has also its use and influence; and a wary reasoning from analogy leads us often into the discovery of truths, and useful productions, which would otherwise lie concealed.

§. 13. Though the common experience, and the ordinary course of things, have justly a mighty influence on the minds of men, to make them give or refuse credit to any thing proposed to their belief; yet there is one case wherein the strangeness of the fact lessens not the assent to a fair testimony given of it.

One case
where contrary
experience lessens
not the testi-
mony.

For

For where such supernatural events are suitable to ends aimed at by him, who has the power to change the course of nature ; there, under such circumstances, they may be the fitter to procure belief, by how much the more they are beyond, or contrary to ordinary observation. This is the proper case of *miracles*, which well attested, do not only find credit themselves, but give it also to other truths, which need such confirmation.

The bare testimony of revelation is the highest certainty.

§. 14. Besides those we have hitherto mentioned, there is one sort of propositions that challenge the highest degree of our assent upon bare testimony, whether the thing proposed agree or disagree with common experience, and the ordinary course of things, or no. The reason whereof is, because the testimony is of such an one as cannot deceive, nor be deceived, and that is of God himself. This carries with it assurance beyond doubt, evidence beyond exception. This is called by a peculiar name *revelation*, and our assent to it *faith*: which as absolutely determines our minds, and as perfectly excludes all wavering, as our knowledge itself; and we may as well doubt of our own being, as we can, whether any revelation from God be true. So that faith is a settled and sure principle of assent and assurance, and leaves no manner of room for doubt or hesitation. Only we must be sure, that it be a divine revelation, and that we understand it right; else we shall expose ourselves to all the extravagancy of enthusiasm, and all the error of wrong principles, if we have faith and assurance in what is not divine revelation. And therefore in those cases our assent can be rationally no higher than the evidence of its being a revelation, and that this is the meaning of the expressions it is delivered in. If the evidence of its being a revelation, or that this is its true sense, be only on probable proofs, our assent can reach no higher than an assurance or diffidence, arising from the more or less apparent probability of the proofs. But of faith, and the precedency it ought to have before other arguments of persuasion, I shall

Speak

ſpeak more hereafter, where I treat of it, as it is ordinarily placed, in contradiftinction to reaſon ; though, in truth, it be nothing elſe but an aſſent founded on the higheſt reaſon.

C H A P. XVII.

Of Reason.

§. 1. **T**HE word *reaſon*, in the *Engliſh* language, *has different ſignifications* : ſometimes it is taken for true and clear principles ; ſometimes for clear and fair deductions from thoſe principles ; and ſometimes for the cauſe, and particularly the final cauſe. But the conſideration I ſhall have of it here, is in a ſignification different from all theſe ; and that is, as it ſtands for a faculty in man, that faculty whereby man is ſuppoſed to be diſtinguiſhed from beaſts, and wherein it is evident he much ſurpaſſes them.

Various ſignifications of the word reaſon.

§. 2. If general knowledge, as has been ſhewn, conſiſts in a perception of the agreement or diſagreement of our own *ideas*, and the knowledge of the exiſtence of all things without us (except only of a God, whoſe exiſtence every man may certainly know and demonſtrate to himſelf from his own exiſtence) be had only by our ſenſes ; what room then is there for the exerciſe of any other faculty, but outward ſenſe, and inward perception ? What need is there of reaſon ? Very much ; both for the enlargement of our knowledge, and regulating our aſſent : for it hath to do both in knowledge and opinion, and is neceſſary and aſſiſting to all our other intellectual faculties, and, indeed, contains two of them, *viz. ſagacity and illation*. By the one it finds out, and by the other it ſo orders the intermediate *ideas*, as to diſcover what connexion there is in each link of the chain,

Wherein reaſoning conſiſts.

chain, whereby the extremes are held together; and thereby, as it were, to draw into view the truth sought for, which is that we call *illation* or *inference*, and consists in nothing but the perception of the connexion there is between the *ideas*, in each step of the deduction, whereby the mind comes to see either the certain agreement or disagreement of any two *ideas*, as in demonstration, in which it arrives at knowledge; or their probable connexion, on which it gives or with-holds its assent, as in opinion. Sense and intuition reach but a very little way. The greatest part of our knowledge depends upon deductions and intermediate *ideas*: and in those cases where we are fain to substitute assent instead of knowledge, and take propositions for true without being certain they are so, we have need to find out, examine, and compare the grounds of their probability. In both these cases, the faculty which finds out the means, and rightly applies them to discover certainty in the one, and probability in the other, is that which we call reason. For, as reason perceives the necessary and indubitable connexion of all the *ideas* or proofs one to another, in each step of any demonstration that produces knowledge; so it likewise perceives the probable connexion of all the *ideas* or proofs one to another, in every step of a discourse to which it will think assent due. This is the lowest degree of that which can be truly called reason. For, where the mind does not perceive this probable connexion; where it does not discern whether there be any such connexion or no, there men's opinions are not the product of judgment, or the consequence of reason, but the effects of chance and hazard, of a mind floating at all adventures, without choice, and without direction.

Its four parts. §. 3. So that we may in *reason* consider these *four degrees*; the first and highest is the discovering and finding out of proofs; the second, the regular and methodical disposition of them, and laying them in a clear and fit order, to make their connexion

connexion and force be plainly and easily perceived; the third is the perceiving their connexion; and the fourth, a making a right conclusion. These several degrees may be observed in any mathematical demonstration: it being one thing to perceive the connexion of each part, as the demonstration is made by another; another to perceive the dependance of the conclusion on all the parts; a third to make out a demonstration clearly and neatly one's self; and something different from all these, to have first found out those intermediate *ideas* or proofs by which it is made.

§. 4. There is one thing more, which I shall desire to be considered concerning reason; and that is, whether *syllogism*, as is generally thought, be the proper instrument of it, and the usefulest way of exercising this faculty. The causes I have to doubt, are these:

Syllogism not
the great in-
strument of
reason.

First, Because syllogism serves our reason but in one only of the fore-mentioned parts of it; and that is, to shew the connexion of the proofs in any one instance, and no more; but in this it is of no great use, since the mind can perceive such connexion where it really is, as easily, nay perhaps better, without it.

If we will observe the actings of our own minds, we shall find that we reason best and clearest, when we only observe the connexion of the proof, without reducing our thoughts to any rule of syllogism. And therefore we may take notice, that there are many men that reason exceeding clear and rightly, who know not how to make a syllogism. He that will look into many parts of *Asia* and *America*, will find men reason there, perhaps, as acutely as himself, who yet never heard of a syllogism, nor can reduce any one argument to those forms: and I believe scarce any one ever makes syllogisms in reasoning within himself. Indeed syllogism is made use of on occasion, to discover a fallacy hid in a rhetorical flourish, or cunningly wrapped up in a smooth period; and stripping an absurdity of the cover of wit and good language, shew it in its naked deformity.

But the weakness or fallacy of such a loose discourse it shews by the artificial form it is put into, only to those who have thoroughly studied *mode* and *figure*, and have so examined the many ways that three propositions may be put together, as to know which of them does certainly conclude right, and which not, and upon what grounds it is that they do so. All who have so far considered syllogism, as to see the reason why, in three propositions laid together, in one form the conclusion will be certainly right, but in another not certainly so, I grant are certain of the conclusions they draw from the premises in the allowed *modes* and *figures*. But they who have not so far looked into those forms, are not sure, by virtue of syllogism, that the conclusion certainly follows from the premises; they only take it to be so by an implicit faith in their teachers, and a confidence in those forms of argumentation; but this is still but believing, not being certain. Now, if, of all mankind, those who can make syllogisms, are extremely few in comparison of those who cannot, and if of those few who have been taught logick, there is but a very small number who do any more than believe that syllogisms, in the allowed *modes* and *figures*, do conclude right, without knowing certainly that they do so; if syllogisms must be taken for the only proper instrument of reason and means of knowledge, it will follow, that before *Aristotle* there was not one man that did, or could know any thing by reason; and that since the invention of syllogisms, there is not one of ten thousand that doth.

But God has not been so sparing to men to make them barely two-legged creatures, and left it to *Aristotle* to make them rational, *i. e.* those few of them that he could get so to examine the grounds of syllogisms, as to see, that, in above threescore ways that three propositions may be laid together, there are but about fourteen wherein one may be sure that the conclusion is right, and upon what ground it is that in these few the conclusion is certain, and in the other not. God

has been more bountiful to mankind than so: he has given them a mind that can reason without being instructed in methods of syllogizing: the understanding is not taught to reason by these rules; it has a native faculty to perceive the coherence or incoherence of its *ideas*, and can range them right, without any such perplexing repetitions. I say not this any way to lessen *Aristotle*, whom I look on as one of the greatest men amongst the ancients; whose large views, acuteness, and penetration of thought, and strength of judgment, few have equalled; and who in this very invention of forms of argumentation, wherein the conclusion may be shewn to be rightly inferred, did great service against those who were not ashamed to deny any thing. And I readily own, that all right reasoning may be reduced to his forms of syllogism. But yet I think, without any diminution to him, I may truly say, that they are not the only, nor the best way of reasoning, for the leading of those into truth who are willing to find it, and desire to make the best use they may of their reason, for the attainment of knowledge. And he himself, it is plain, found out some forms to be conclusive, and others not; not by the forms themselves, but by the original way of knowledge, *i. e.* by the visible agreement of *ideas*. Tell a country gentlewoman, that the wind is South-West, and the weather lowering, and like to rain, and she will easily understand, it is not safe for her to go abroad thin clad, in such a day, after a fever: she clearly sees the probable connexion of all these, *viz.* South-West wind, and clouds, rain, wetting, taking cold, relapse, and danger of death, without tying them together in those artificial and cumbersome *fetters* of several syllogisms, that clog and hinder the mind, which proceeds from one part to another quicker and clearer without them: and the probability which she easily perceives in things thus in their native state would be quite lost, if this argument were managed learnedly, and proposed in mode and figure. For it very often confounds the connexion: and, I think, every one will perceive in mathematical demonstrations,

that the knowledge gained thereby comes shortest and clearest without syllogisms.

Inference is looked on as the great act of the rational faculty, and so it is, when it is rightly made: but the mind, either very desirous to enlarge its knowledge, or very apt to favour the sentiments it has once imbibed, is very forward to make inferences, and therefore often makes too much haste, before it perceives the connexion of the *ideas* that must hold the extremes together.

To infer, is nothing but, by virtue of one proposition laid down as true, to draw in another as true, *i. e.* to see or suppose such a connexion of the two *ideas* of the inferred proposition, *v. g.* Let this be the proposition laid down, *men shall be punished in another world*, and from thence be inferred this other, *Then men can determine themselves*. The question now is to know, whether the mind has made this inference right, or no; if it has made it by finding out the intermediate *ideas*, and taking a view of the connexion of them, placed in a due order, it has proceeded rationally, and made a right inference. If it has done it without such a view, it has not so much made an inference that will hold, or an inference of right reason, as shewn a willingness to have it be, or be taken for such. But in either case is it syllogism that discovered those *ideas*, or shewed the connexion of them? for they must be both found out, and the connexion every where perceived, before they can rationally be made use of in syllogism; unless it can be said, that any *idea*, without considering what connexion it hath with the two other, whose *agreement* should be shewn by it, will do well enough in a syllogism, and may be taken at a venture for the *medius terminus*, to prove any conclusion. But this nobody will say, because it is by virtue of the perceived *agreement* of the intermediate *idea* with the extremes, that the extremes are concluded to agree; and therefore each intermediate *idea* must be such, as in the whole chain hath a visible connexion with those two it is placed between, or else thereby the conclusion

clusion cannot be inferred or drawn in; for where-
 ever any link of the chain is loose, and without con-
 nexion, there the whole strength of it is lost, and
 it hath no force to infer or draw in any thing. In the
 instance above-mentioned, what is it shews the force of
 the inference, and consequently the reasonableness of it,
 but a view of the connexion of all the intermediate *ideas*
 that draw in the conclusion or proposition inferred?
v. g. men shall be punished, ————— God the punisher;
————— just punishment, ————— the punished guilty,
————— could have done otherwise, ————— freedom
————— self-determination: by which chain of *ideas*
 thus visibly linked together in train, *i. e.* each inter-
 mediate *idea* agreeing on each side with those two it is
 immediately placed between, the *ideas* of men and self-
 determination appear to be connected, *i. e.* this propo-
 sition, *men can determine themselves*, is drawn in, or in-
 ferred from this, *that they shall be punished in the other*
world. For here the mind seeing the connexion there
 is between the *idea* of men's punishment in the other world;
 and the *idea* of God punishing; between God punishing,
 and the justice of the punishment; between the justice of
 the punishment and guilt; between guilt and a power to do
otherwise; between a power to do otherwise and freedom;
 and between freedom and self-determination, sees the
 connexion between men and self-determination.

Now, I ask, whether the connexion of the extremes
 be not more clearly seen in this simple and natural dis-
 position, than in the perplexed repetitions and jumble
 of five or six syllogisms? I must beg pardon for calling
 it jumble, till somebody shall put these *ideas* into so
 many syllogisms, and then say, that they are less jum-
 bled, and their connexion more visible, when they are
 transposed and repeated, and spun out to a greater
 length in artificial forms, than in that short natural
 plain order they are laid down in here, wherein every
 one may see it, and wherein they must be seen, before
 they can be put into a train of syllogisms. For the
 natural order of the connecting *ideas* must direct the

order of the syllogisms, and a man must see the connexion of each intermediate *idea* with those that it connects, before he can with reason make use of it in a syllogism. And when all those syllogisms are made, neither those that are, nor those that are not logicians, will see the force of the argumentation, *i.e.* the connexion of the extremes, one jot the better. [For those that are not men of art, not knowing the true forms of syllogism, nor the reasons of them, cannot know whether they are made in right and conclusive *modes* and *figures* or no, and so are not at all helped by the forms they are put into, though by them the natural order, wherein the mind could judge of their respective connexion, being disturbed, renders the illation much more uncertain than without them.] And as for *logicians* themselves, they see the connexion of each intermediate *idea* with those it stands between, (on which the force of the inference depends) as well before as after the syllogism is made, or else they do not see it at all. For a *syllogism* neither shews nor strengthens the connexion of any two *ideas* immediately put together, but only by the connexion seen in them shews what connexion the extremes have one with another. But what connexion the intermediate has with either of the extremes in that *syllogism*, that no *syllogism* does or can shew. That the mind only doth, or can perceive, as they stand there in that *juxta-position*, only by its own view, to which the syllogistical form it happens to be in gives no help or light at all; it only shews, that if the intermediate *idea* agrees with those it is on both sides immediately applied to, then those two remote ones, or as they are called *extremes*, do certainly agree; and therefore the immediate connexion of each *idea* to that which it is applied to on each side, on which the force of the reasoning depends, is as well seen before as after the *syllogism* is made, or else he that makes the *syllogism* could never see it at all. This, as has been already observed, is seen only by the eye, or the perceptive faculty of the mind,
taking

taking a view of them laid together, in a *juxta-position*; which view of any two it has equally, whenever they are laid together in any proposition, whether that proposition be placed as a *major*, or a *minor*, in a *syllogism*, or no,

Of what use then are *syllogisms*? I answer, their chief and main use is in the schools, where men are allowed without shame to deny the agreement of *ideas*, that do manifestly agree; or out of the schools to those, who from thence have learned without shame to deny the connexion of *ideas*, which even to themselves is visible. But to an ingenuous searcher after truth, who has no other aim but to find it, there is no need of any such form to force the allowing of the inference: the truth and reasonableness of it is better seen in ranging of the *ideas* in a simple and plain order. And hence it is, that men, in their own enquiries after truth, never use *syllogisms* to convince themselves, [or in teaching others to instruct willing learners.] Because, before they can put them into a *syllogism*, they must see the connexion that is between the intermediate *idea*, and the two other *ideas* it is set between, and applied to, to shew their agreement; and when they see that, they see whether the inference be good or no, and so *syllogism* comes too late to settle it. For, to make use again of the former instance, I ask, whether the mind, considering the *idea* of justice, placed as an intermediate *idea* between the *punishment* of men, and the guilt of the punished, (and, till it does so consider it, the mind cannot make use of it as a *medius terminus*) does not as plainly see the force and strength of the inference, as when it is formed into *syllogism*? To shew it in a very plain and easy example; let *animal* be the intermediate *idea*, or *medius terminus*, that the mind makes use of to shew the connexion of *homo* and *vivens*; I ask, whether the mind does not more readily and plainly see that connexion in the simple and proper position of the connecting *idea* in the middle; thus,

A a 3

Homo

Homo———*Animal*———*Vivens*;

Than in this perplexed one,

Animal——*Vivens*——*Homo*——*Animal*.

Which is the position these *ideas* have in a syllogism, to shew the connexion between *homo* and *vivens* by the intervention of *animal*.

Indeed syllogism is thought to be of necessary use, even to the lovers of truth, to shew them the fallacies that are often concealed in florid, witty, or involved discourses. But that this is a mistake, will appear, if we consider that the reason why sometimes men, who sincerely aim at truth, are imposed upon by such loose, and, as they are called, rhetorical discourses, is, that their fancies being struck with some lively metaphorical representations, they neglect to observe, or do not easily perceive, what are the true *ideas* upon which the inference depends. Now, to shew such men the weakness of such an argumentation, there needs no more but to strip it of the superfluous *ideas*, which, blended and confounded with those on which the *inference* depends, seem to shew a connexion where there is none, or at least do hinder the discovery of the want of it; and then to lay the naked *ideas*, on which the force of the argumentation depends, in their due order; in which position the mind taking a view of them, sees what connexion they have, and so is able to judge of the inference, without any need of a syllogism at all.

I grant that *mode* and *figure* are commonly made use of in such cases, as if the detection of the incoherence of such loose discourses were wholly owing to the syllogistical form: and so I myself formerly thought; till upon a stricter examination, I now find, that laying the intermediate *ideas* naked in their due order, shews the incoherence of the argumentation better than syllogism; not only as subjecting each link of the chain to the immediate view of the mind in its proper place,

place, whereby its connexion is best observed; but also because syllogism shews the incoherence only to those (who are not one of ten thousand) who perfectly understand *mode* and *figure*, and the reason upon which those forms are established; whereas a due and orderly placing of the *ideas*, upon which the inference is made, makes every one, whether logician, or not logician, who understands the terms, and hath the faculty to perceive the agreement or disagreement of such *ideas*, (without which, in or out of syllogism, he cannot perceive the strength or weakness, coherence or incoherence of the discourse) see the want of connexion in the argumentation, and the absurdity of the inference.

And thus I have known a man, unskilful in syllogism, who at first hearing could perceive the weakness and inconclusiveness of a long artificial and plausible discourse, wherewith others better skilled in syllogism have been misled; and I believe there are few of my readers who do not know such. And indeed, if it were not so, the debates of most prince's councils, and the business of assemblies, would be in danger to be mismanaged, since those who are relied upon, and have usually a great stroke in them, are not always such, who have the good luck to be perfectly knowing in the forms of syllogism, or expert in *mode* and *figure*. And if syllogism were the only, or so much as the surest way to detect the fallacies of artificial discourses, I do not think that all mankind, even princes in matters that concern their crowns and dignities, are so much in love with falsehood and mistake, that they would every where have neglected to bring syllogism into the debates of moment, or thought it ridiculous so much as to offer them in affairs of consequence: a plain evidence to me, that men of parts and penetration, who were not idly to dispute at their ease, but were to act according to the result of their debates, and often pay for their mistakes with their heads or fortunes, found those scholastick forms were of little use to discover truth or fallacy, whilst both the one

and the other might be shewn, and better shewn without them, to those who would not refuse to see what was visibly shewn them.

Secondly, Another reason that makes me doubt whether syllogism be the only proper instrument of reason in the discovery of truth, is, that of whatever use *mode* and *figure* is pretended to be in the laying open of fallacy, (which has been above considered) those scholastick forms of discourse are not less liable to fallacies, than the plainer ways of argumentation; and for this I appeal to common observation, which has always found these artificial methods of reasoning more adapted to catch and entangle the mind, than to instruct and inform the understanding. And hence it is, that men, even when they are baffled and silenced in this scholastick way, are seldom or never convinced, and so brought over to the conquering side: they perhaps acknowledge their adversary to be the more skilful disputant, but rest nevertheless persuaded of the truth on their side; and go away, worsted as they are, with the same opinion they brought with them, which they could not do, if this way of argumentation carried light and conviction with it, and made men see where the truth lay; and therefore syllogism has been thought more proper for the attaining victory in dispute, than for the discovery or confirmation of truth in fair enquiries: and if it be certain, that fallacies can be couched in syllogism, as it cannot be denied, it must be something else, and not syllogism, that must discover them.

I have had experience how ready some men are, when all the use which they have been wont to ascribe to any thing is not allowed, to cry out, that I am for laying it wholly aside. But to prevent such unjust and groundless imputations, I tell them, that I am not for taking away any helps to the understanding, in the attainment of knowledge. And if men skilled in, and used to syllogisms, find them assisting to their reason in the discovery of truth, I think

think they ought to make use of them. All that I aim at is, that they should not ascribe more to these forms than belongs to them, and think that men have no use, or not so full a use of their reasoning faculty without them. Some eyes want spectacles to see things clearly and distinctly; but let not those that use them therefore say, nobody can see clearly without them: those who do so will be thought, in favour of art (which perhaps they are beholden to) a little too much to depress and discredit nature. Reason, by its own penetration, where it is strong and exercised, usually sees quicker and clearer without syllogism. If use of those spectacles has so dimmed its sight, that it cannot without them see consequences or inconsequences in argumentation, I am not so unreasonable as to be against the using them. Every one knows what best fits his own sight: but let him not thence conclude all in the dark, who use not just the same helps that he finds a need of.

§. 5. But, however it be in knowledge, I think I may truly say, it is of *far* less, or no use at all in *probabilities*. For the assent there being to be determined by the preponderancy, after a due weighing of all the proofs, with all circumstances on both sides, nothing is so unfit to assist the mind in that, as syllogism; which running away with one assumed probability, or one topical argument, pursues that till it has led the mind quite out of sight of the thing under consideration; and forcing it upon some remote difficulty, holds it fast there, intangled, perhaps, and as it were manacled in the chain of syllogisms, without allowing it the liberty, much less affording it the helps, requisite to shew on which side, all things considered, is the greater probability.

Helps little in demonstration, less in probability.

§. 6. But let it help us (as perhaps may be said) in convincing men of their errors and mistakes; (and yet I would fain see the man that was forced out of his opinion

Serves not to increase our knowledge but fence with it.

by

by dint of *syllogism*) yet still it fails our *reason* in that part, which, if not its highest perfection, is yet certainly its hardest task, and that which we most need its help in; and that is, *the finding out of proofs and making new discoveries*. The rules of *syllogism* serve not to furnish the mind with those intermediate *ideas* that may shew the connexion of remote ones. This way of reasoning discovers no new proofs, but is the art of marshalling and ranging the old ones we have already. The 47th proposition of the first book of *Euclid* is very true; but the discovery of it, I think, not owing to any rules of common logick. A man knows first, and then he is able to prove *syllogistically*: so that *syllogism* comes after knowledge, and then a man has little or no need of it. But it is chiefly by the finding out those *ideas* that shew the connexion of distant ones, that our stock of knowledge is increased, and that useful arts and sciences are advanced. *Syllogism*, at best, is but the art of fencing with the little knowledge we have, without making any addition to it. And if a man should employ his reason all this way, he will not do much otherwise than he, who having got some iron out of the bowels of the earth, should have it beaten up all into swords, and put it into his servants hands to fence with, and bang one another. Had the king of *Spain* employed the hands of his people, and his *Spanish* iron so, he had brought to light but little of that treasure that lay so long hid in the dark entrails of *America*. And I am apt to think, that he who shall employ all the force of his reason only in brandishing of *syllogisms*, will discover very little of that mass of knowledge which lies yet concealed in the secret recesses of nature; and which, I am apt to think, native rustick reason (as it formerly has done) is likelier to open a way to, and add to the common stock of mankind, rather than any scholastick proceeding by the strict rules of mode and figure.

§. 7. I doubt not, nevertheless, but there are ways to be found to assist our reason in this most useful part; and this the judicious *Hooker* encourages me to say, who in his *Eccl. Pol.* 1. 1. §. 6. speaks thus: *If there might be added the right helps of true art and learning; (which helps, I must plainly confess, this age of the world, carrying the name of a learned age, doth neither much know, nor generally regard) there would undoubtedly be almost as much difference in maturity of judgment between men therewith inured, and that which now men are, as between men that are now, and innocents.* I do not pretend to have found or discovered here any of those right helps of art this great man of deep thought mentions; but this is plain, that syllogism, and the logick now in use, which were as well known in his days, can be none of those he means. It is sufficient for me, if by a discourse perhaps something out of the way, I am sure as to me wholly new and unborrowed, I shall have given an occasion to others to cast about for new discoveries, and to seek in their own thoughts for those right helps of art, which will scarce be found, I fear, by those who servilely confine themselves to the rules and dictates of others. For beaten tracts lead these sort of cattle, (as an observing *Roman* calls them) whose thoughts reach only to imitation, *non quo eundum est, sed quo itur.* But I can be bold to say, that this age is adorned with some men of that strength of judgment, and largeness of comprehension, that, if they would employ their thoughts on this subject, could open new and undiscovered ways to the advancement of knowledge.

Other helps
should be
sought.

§. 8. Having here had an occasion to speak of syllogism in general, and the use of it in reasoning, and the improvement of our knowledge, it is fit, before I leave this subject, to take notice of one manifest mistake in the rules or syllogism; viz. that no syllogistical reasoning can be right and conclusive, but what has, at least, one general

We reason
about parti-
culars.

ral proposition in it. As if we could not *reason*, and have knowledge *about particulars*: whereas, in truth, the matter rightly considered, the immediate object of all our reasoning and knowledge is nothing but particulars. Every man's reasoning and knowledge is only about the *ideas* existing in his own mind, which are truly every one of them particular existences; and our knowledge and reasoning about other things is only as they correspond with those our particular *ideas*. So that the perception the agreement or disagreement of our particular *ideas* is the whole and utmost of all our knowledge. Universality is but accidental to it, and consists only in this, that the particular *ideas* about which it is, are such as more than one particular thing can correspond with, and be represented by. But the perception of the agreement or disagreement of any two *ideas*, and consequently our knowledge, is equally clear and certain, whether either, or both, or neither of those *ideas* be capable of representing more real beings than one, or no. One thing more I crave leave to offer about syllogism, before I leave it, *viz.* May one not upon just ground enquire, whether the form syllogism now has, is that which in reason it ought to have? For the *medius terminus* being to join the extremes, *i. e.* the intermediate *ideas* by its intervention, to shew the agreement or disagreement of the two in question, would not the position of the *medius terminus* be more natural, and shew the agreement or disagreement of the extremes clearer and better, if it were placed in the middle between them; which might be easily done by transposing the propositions, and making the *medius terminus* the predicate of the first, and the subject of the second. As thus,

Omnis Homo est Animal,
Omne Animal est vivens,
Ergo omnis Homo est vivens.

*Omne Corpus est extensum & solidum,
Nullum extensum & solidum est pura extensio,
Ergo Corpus non est pura extensio.*

I need not trouble my reader with instances in syllogisms, whose conclusions are particular. The same reason holds for the same form in them, as well as in the general.

§. 9. Reason, though it penetrates into the depths of the sea and earth, elevates our thoughts as high as the stars, and leads us through the vast spaces and large rooms of this mighty fabrick, yet it comes far short of the real extent of even corporeal being; and there are many instances wherein it *fails us*: As,

First, Reason fails us for want of *ideas*.

First, It perfectly fails us, *where our ideas fail*. It neither does, nor can extend itself farther than they do. And therefore, where-ever we have no *ideas*, our reasoning stops, and we are at an end of our reckoning: and if at any time we reason about words, which do not stand for any *ideas*, it is only about those sounds, and nothing else.

§. 10. *Secondly*, Our reason is often puzzled, and at a loss, *because of the obscurity, confusion, or imperfection of the ideas it is employed about*; and there we are involved in difficulties and contradictions. Thus, not having any perfect *idea* of the least extension of *matter*, nor of infinity, we are at a loss about the divisibility of *matter*; but having perfect, clear, and distinct *ideas* of number, our reason meets with none of those inextricable difficulties in numbers, nor finds itself involved in any contradictions about them. Thus we having but imperfect *ideas* of the operations of our minds, and of the beginning of motion or thought, how the mind produces either of them in us, and much imperfecter yet of the operation of GOD, run into great difficulties about free created agents, which reason cannot well extricate itself out of.

2dly, Because of obscure and imperfect *ideas*.

Thirdly, For want of intermediate *ideas*.

§. 11. *Thirdly*, Our reason is often at a stand, *because it perceives not those ideas, which could serve to shew the certain or probable agreement or disagreement of any two other ideas*: and in this some men's faculties far out-go others. Till *algebra*, that great instrument and instance of human sagacity, was discovered, men with amazement looked on several of the demonstrations of ancient mathematicians, and could scarce forbear to think the finding several of those proofs to be something more than human.

Fourthly, Because of wrong principles.

§. 12. *Fourthly*, The mind, *by proceeding upon false principles*, is often engaged in absurdities and difficulties, brought into straits and contradictions, without knowing how to free itself: and in that case it is in vain to implore the help of reason, unless it be to discover the falshood, and reject the influence of those wrong principles. Reason is so far from clearing the difficulties which the building upon false foundations brings a man into, that, if he will pursue it, it entangles him the more, and engages him deeper in perplexities.

Fifthly, Because of doubtful terms.

§. 13. *Fifthly*, As obscure and imperfect *ideas* often involve our reason, so, upon the same ground, do *dubious words*, and uncertain signs, *often* in discourses and arguings, when not warily attended to, *puzzle men's reason*, and bring them to a *nonplus*: but these two latter are our fault, and not the fault of reason. But yet the consequences of them are nevertheless obvious; and the perplexities or errors they fill men's minds with, are every where observable.

Our highest degree of knowledge is intuitive, without reasoning.

§. 14. Some of the *ideas* that are in the mind, are so there, that they can be by themselves immediately compared one with another: and in these the mind is able to perceive that they agree or disagree,

agree, as clearly as that it has them. Thus the mind perceives, that an arch of a circle is less than the whole circle, as clearly as it does the *idea* of a circle: and this therefore, as has been said, I call *intuitive knowledge*, which is certain, beyond all doubt, and needs no probation, nor can have any; this being the highest of all human certainty. In this consists the evidence of all those *maxims* which nobody has any doubt about, but every man (does not, as is said, only assent to, but) knows to be true, as soon as ever they are proposed to his understanding. In the discovery of, and assent to these truths, there is no use of the discursive faculty, *no need of reasoning*; but they are known by a superior, and higher degree of evidence. And such, if I may guess at things unknown, I am apt to think, that angels have now, and the spirits of just men made perfect shall have in a future state, of thousands of things, which now either wholly escape our apprehensions, or which our short-sighted reason having got some faint glimpse of, we, in the dark, grope after.

§. 15. But though we have here and there a little of this clear light, some sparks of bright knowledge; yet the greatest part of our *ideas* are such, that we cannot discern their agreement or disagreement, by an immediate comparing them. And in all these we have *need of reasoning*, and must, by discourse and inference, make our discoveries. Now of these there are two sorts, which I shall take the liberty to mention here again.

The next is demonstration by reasoning.

First, Those whose agreement or disagreement, though it cannot be seen by an immediate putting them together, yet may be examined by the intervention of other *ideas*, which can be compared with them. In this case, when the agreement or disagreement of the intermediate *idea* on both sides, with those which we would compare, is plainly discerned, there it amounts to demonstration, whereby knowledge is produced, which,

which, though it be certain, yet it is not so easy, nor altogether so clear, as *intuitive knowledge*; because in that there is barely one simple intuition, wherein there is no room for any the least mistake or doubt; the truth is seen all perfectly at once. In demonstration, it is true, there is intuition too, but not altogether at once; for there must be a remembrance of the intuition of the agreement of the *medium*, or intermediate *idea*, with that we compared it with before, when we compare it with the other; and where there be many *mediums*, there the danger of the mistake is the greater. For each agreement or disagreement of the *ideas* must be observed and seen in each step of the whole train, and retained in the memory, just as it is, and the mind must be sure, that no part of what is necessary to make up the demonstration, is omitted or overlooked. This makes some demonstrations long and perplexed, and too hard for those who have not strength of parts distinctly to perceive, and exactly carry so many particulars orderly in their heads. And even those, who are able to master such intricate speculations, are fain sometimes to go over them again, and there is need of more than one review before they can arrive at certainty. But yet, where the mind clearly retains the intuition it had of the agreement of any *idea* with another, and that with a third, and that with a fourth, &c. there the agreement of the first and the fourth is a demonstration, and produces certain knowledge, which may be called *rational knowledge*, as the other is *intuitive*.

To supply the narrowness of this, we have nothing but judgment upon probable reasoning.

§. 16. *Secondly*, There are other *ideas*, whose agreement or disagreement can no otherwise be judged of, but by the intervention of others, which have not a certain agreement with the extremes, but an usual or likely one: and in these it is that the judgment is properly exercised, which is the acquiescing of the mind, that any *ideas* do agree, by comparing them with such probable *mediums*. This,

though

though it never amounts to knowledge, no, not to that which is the lowest degree of it; yet sometimes the intermediate *ideas* tie the extremes so firmly together, and the probability is so clear and strong, that assent as necessarily follows it, as knowledge does demonstration. The great excellency and use of the judgment is to observe right, and take a true estimate of the force and weight of each probability; and then casting them up all right together, chuse that side which has the overbalance.

§. 17. *Intuitive knowledge* is the perception of the certain agreement or disagreement of two *ideas*, immediately compared together.

Intuition, demonstration, judgment.

Rational knowledge is the perception of the certain agreement or disagreement of any two *ideas*, by the intervention of one or more other *ideas*.

Judgment is the thinking or taking two *ideas* to agree or disagree, by the intervention of one or more *ideas*, whose certain agreement or disagreement with them it does not perceive, but hath observed to be frequent and usual.

§. 18. Though the deducing one proposition from another, or making *inferences in words*, be a great part of reason, and that which it is usually employed about; yet the principal act of ratiocination is the finding the agreement or disagreement of two *ideas* one with another, by the intervention of a third. As a man, by a yard, finds two houses to be of the same length, which could not be brought together to measure their equality by *juxta-position*. Words have their consequences, as the signs of such *ideas*: and things agree or disagree, as really they are; but we observe it only by our *ideas*.

Consequences of words, and consequences of *ideas*.

§. 19. Before we quit this subject, it may be worth our while a little to reflect on *four sorts of arguments*, that men in their reasonings with others do ordinarily

Four sorts of arguments.
First, *Ad Verecundiam*.

make use of, to prevail on their assent; or at least so to awe them, as to silence their opposition.

First, The first is, to alledge the opinions of men, whose parts, learning, eminency, power, or some other cause, has gained a name, and settled their reputation in the common esteem with some kind of authority. When men are established in any kind of dignity, it is thought a breach of modesty for others to derogate any way from it, and question the authority of men, who are in possession of it. This is apt to be censured, as carrying with it too much of pride, when a man does not readily yield to the determination of approved authors, which is wont to be received with respect and submission by others; and it is looked upon as insolence for a man to set up, and adhere to his own opinion, against the current stream of antiquity, or to put it in the balance against that of some learned doctor, or otherwise approved writer. Whoever backs his tenets with such authorities, thinks he ought thereby to carry the cause, and is ready to stile it impudence in any one who shall stand out against them. This I think may be called *argumentum ad verecundiam*.

Secondly, *Ad ignorantiam*.

§. 20. *Secondly*, Another way that men ordinarily use to drive others, and force them to submit their judgments, and receive the opinion in debate, is to require the adversary to admit what they alledge as a proof, or to assign a better. And this I call *argumentum ad ignorantiam*.

Thirdly, *Ad hominem*.

§. 21. *Thirdly*, A third way is to press a man with consequences drawn from his own principles or concessions. This is already known under the name of *argumentum ad hominem*.

Fourthly, *Ad judicium*.

§. 22. *Fourthly*, The fourth is the using of proofs drawn from any of the foundations of knowledge or probability. This I call *argumentum ad judicium*. This alone of all the four brings true instruction with it, and advances us in our way to knowledge. For, 1. It argues not another

another man's opinion to be right, because I, out of respect, or any other consideration but that of *conviction*, will not contradict him. 2. It proves not another man to be in the right way, nor that I ought to take the same with him, because I know not a better. 3. Nor does it follow, that another man is in the right way, because he has shewn me that I am in the wrong. I may be modest, and therefore not oppose another man's persuasion; I may be ignorant, and not be able to produce a better; I may be in an error, and another may shew me that I am so. This may dispose me perhaps for the reception of truth, but helps me not to it; that must come from proofs and arguments, and light arising from the nature of things themselves, and not from my shamefacedness, ignorance, or error.

§. 23. By what has been before said of *reason*, we may be able to make some guess at the distinction of things into those that are according to, above, and contrary to reason. 1. *According to reason* are such propositions, whose truth we can discover by examining and tracing those *ideas* we have from *sensation* and *reflection*; and by natural deduction find to be true or probable. 2. *Above reason* are such propositions, whose truth or probability we cannot by reason derive from those principles. 3. *Contrary to reason* are such propositions as are inconsistent with, or irreconcilable to our clear and distinct *ideas*. Thus the existence of one GOD is according to reason: the existence of more than one GOD, contrary to reason; the resurrection of the dead, above reason. Farther, as *above reason* may be taken in a double *sense*, viz. either as signifying above probability, or above certainty; so, in that large sense also, *contrary to reason* is, I suppose, sometimes taken.

Above, contrary, and according to reason.

§. 24. There is another use of the word *reason*, wherein it is *opposed to faith*; which, though it be in itself a very improper way of speaking, yet common use has so au-

Reason and faith not opposite.

thorized it, that it would be folly either to oppose or hope to remedy it; only I think it may not be amiss to take notice, that however *faith* be opposed to *reason*, *faith* is nothing but a firm assent of the mind; which, if it be regulated as is our duty, cannot be afforded to any thing but upon good reason, and so cannot be opposite to it. He that believes, without having any reason for believing, may be in love with his own fancies; but neither seeks truth as he ought, nor pays the obedience due to his Maker, who would have him use those discerning faculties he has given him, to keep him out of mistake and error. He that does not this to the best of his power, however he sometimes lights on truth, is in the right but by chance; and I know not whether the luckiness of the accident will excuse the irregularity of his proceeding. This at least is certain, that he must be accountable for whatever mistakes he runs into; whereas he that makes use of the light and faculties GOD has given him, and seeks sincerely to discover truth by those helps and abilities he has, may have this satisfaction in doing his duty as a rational creature, that though he should miss truth, he will not miss the reward of it: for he governs his assent right, and places it as he should, who in any case or matter whatsoever believes or disbelieves according as reason directs him. He that does otherwise, transgresses against his own light, and misuses those faculties which were given him to no other end, but to search and follow the clearer evidence and greater probability. But, since reason and faith are by some men opposed, we will so consider them in the following chapter.

C H A P. XVIII.

Of Faith and Reason, and their distinct Provinces.

Necessary to
know their
boundaries.

§. I. **I**T has been above shewn, 1. That we are of necessity ignorant, and want knowledge of all sorts, where we want

want *ideas*. 2. That we are ignorant, and want rational knowledge, where we want proofs. 3. That we want general knowledge and certainty, as far as we want clear and determined specifick *ideas*. 4. That we want probability to direct our assent in matters where we have neither knowledge of our own, nor testimony of other men, to bottom our reason upon.

From these things thus premised, I think we may come to lay down the measures and *boundaries between faith and reason*: the want whereof may possibly have been the cause, if not of great disorders, yet at least of great disputes, and perhaps mistakes in the world: for, till it be resolved how far we are to be guided by reason, and how far by faith, we shall in vain dispute, and endeavour to convince one another in matters of religion.

§. 2. I find every sect, as far as reason will help them, make use of it gladly; and where it fails them, they cry out, *It is matter of faith, and above reason*. And

Faith and reason what, as contradistinguished.

I do not see how they can argue with any one, or ever convince a gainsayer, who makes use of the same plea, without setting down strict boundaries between *faith*, and *reason*, which ought to be the first point established in all questions, where *faith* has any thing to do.

Reason therefore here, as contradistinguished to *faith*, I take to be the discovery of the certainty or probability of such propositions or truths, which the mind arrives at by deduction made from such *ideas* which it has got by the use of its natural faculties, viz. by sensation or reflection.

Faith, on the other side, is the assent to any proposition, not thus made out by the *deductions* of reason, but upon the credit of the proposer, as coming from GOD, in some extraordinary way of communication. This way of discovering truths to men we call *revelation*.

No new simple *idea* can be conveyed by traditional revelation.

§. 3. *First*, then I say, that *no man inspired by GOD, can by any revelation communicate to others any new simple ideas, which they had not before from sensation or reflection.* For, whatsoever impressions he himself may have from the immediate hand of *GOD*, this revelation, if it be of new simple *ideas*, cannot be conveyed to another, either by words, or any other signs; because words, by their immediate operation on us, cause no other *ideas* but of their natural sounds; and it is by the custom of using them for signs, that they excite and revive in our minds latent *ideas*; but yet only such *ideas* as were there before. For words seen or heard recal to our thoughts those *ideas* only, which to us they have been wont to be signs of; but cannot introduce any perfectly new, and formerly unknown simple *ideas*. The same holds in all other signs, which cannot signify to us things of which we have before never had any *idea* at all.

Thus whatever things were discovered to *St. Paul* when he was wrapped up into the Third Heaven, whatever new *ideas* his mind there received, all the *description* he can make to others of that place, is only this, that there are such things *as eye hath not seen, nor ear heard, nor hath it entered into the heart of man to conceive.* And supposing *GOD* should discover to any one, supernaturally, a species of creatures inhabiting, for example, *Jupiter* or *Saturn*, (for that it is possible there may be such, nobody can deny) which had six senses, and imprint on his mind the *ideas* conveyed to theirs by that sixth sense, he could no more, by words, produce in the minds of other men those *ideas* imprinted by that sixth sense, than one of us could convey the *idea* of any colour by the sounds of words into a man, who, having the other four senses perfect, had always totally wanted the fifth of seeing. For our simple *ideas* then, which are the foundation and sole matter of all our notions and knowledge, we must depend wholly on our reason, I mean, our natural

ral faculties, and can by no means receive them, or any of them, from *traditional revelation*; I say, *traditional revelation*, in distinction to *original revelation*. By the one, I mean that first impresson which is made immediately by GOD on the mind of any man, to which we cannot set any bounds; and by the other, those impressons delivered over to others in words, and the ordinary ways of conveying our conceptions one to another.

§. 4. *Secondly*, I say, that *the same truths may be discovered, and conveyed down from revelation, which are discoverable to us by reason*, and by those *ideas* we naturally may have. So GOD might, by revelation, discover the truth of any proposition in *Euclid*; as well as men, by the natural use of their faculties, come to make the discovery themselves. In all things of this kind, there is little need or use of revelation, GOD having furnished us with natural, and surer means to arrive at the knowledge of them. For whatsoever truth we come to the clear discovery of, from the knowledge and contemplation of our own *ideas*, will always be certainer to us, than those which are conveyed to us by traditional revelation: for the knowledge we have that this revelation came at first from GOD, can never be so sure as the knowledge we have from the clear and distinct perception of the agreement or disagreement of our own *ideas*: v. g. If it were revealed some ages since, that the three angles of a triangle were equal to two right ones, I might assent to the truth of that proposition upon the credit of the tradition, that it was revealed: but that would never amount to so great a certainty as the knowledge of it, upon the comparing and measuring my own *ideas* of two right angles, and the three angles of a triangle. The like holds in matter of fact, knowable by our senses: v. g. The history of the deluge is conveyed to us by writings, which had their original from

Traditional revelation may make us know propositions knowable also by reason, but not with the same certainty that reason doth.

revelation; and yet nobody, I think, will say, he has as certain and clear a knowledge of the flood, as *Noah* that saw it; or that he himself would have had, had he then been alive, and seen it. For he has no greater an assurance than that of his senses, that it is writ in the book supposed writ by *Moses* inspired; but he has not so great an assurance that *Moses* writ that book, as if he had seen *Moses* write it. So that the assurance of its being a revelation is less still than the assurance of his senses.

Revelation
cannot be ad-
mitted against
the clear evi-
dence of rea-
son.

§. 5. In propositions then, whose certainty is built upon the clear perception of the *agreement or disagreement* of our *ideas*, attained either by immediate intuition, as in self-evident propositions, or by evident deductions of reason in demonstrations, we need not the assistance of revelation, as necessary to gain our assent, and introduce them into our minds; because the natural ways of knowledge could settle them there, or had done it already, which is the greatest assurance we can possibly have of any thing, unless where GOD immediately reveals it to us; and there too our assurance can be no greater than our knowledge is, that it is a *revelation* from GOD. But yet nothing I think can, under that title, shake or over-rule plain knowledge, or rationally prevail with any man to admit it for true, in a direct contradiction to the clear evidence of his own understanding: for since no evidence of our faculties, by which we receive such revelations, can exceed, if equal, the certainty of our intuitive knowledge, we can never receive for a truth any thing that is directly contrary to our clear and distinct knowledge: *v. g.* the *ideas* of one body and one place do so clearly agree, and the mind has so evident a perception of their agreement, that we can never assent to a proposition, that affirms the same body to be in two distant places at once, however it should pretend to the authority of a divine revelation: since the evidence, *First*, That we deceive not our-

selves in ascribing it to GOD; *Secondly*, That we understand it right; can never be so great, as the evidence of our own intuitive knowledge, whereby we discern it impossible for the same body to be in two places at once. And therefore *no proposition can be received for divine revelation*, or obtain the assent due to all such, *if it be contradictory to our clear intuitive knowledge*: because this would be to subvert the principles and foundations of all knowledge, evidence, and assent whatsoever: and there would be left no difference between truth and falsehood, no measures of credible and incredible in the world, if doubtful propositions shall take place before self-evident; and what we certainly know, give way to what we may possibly be mistaken in. In propositions therefore contrary to the clear perception of the agreement or disagreement of any of our *ideas*, it will be in vain to urge them as matters of *faith*. They cannot move our assent, under that or any other title whatsoever: for *faith* can never convince us of any thing that contradicts our knowledge; because, though *faith* be founded on the testimony of GOD, (who cannot lye) revealing any proposition to us; yet we cannot have an assurance of the truth of its being a divine revelation, greater than our own knowledge: since the whole strength of the certainty depends upon our knowledge, that GOD revealed it; which in this case, where the proposition supposed to be revealed contradicts our knowledge or reason, will always have this objection hanging to it, (*viz.*) that we cannot tell how to conceive that to come from GOD, the bountiful author of our Being, which, if received for true, must overturn all the principles and foundations of knowledge he has given us; render all our faculties useless; wholly destroy the most excellent part of his workmanship, our understandings; and put a man in a condition, wherein he will have less light, less conduct, than the beast that perisheth. For if the mind of man can never have a clearer (and perhaps not so clear) evidence of any thing to be a divine *revelation*,

velation, as it has of the principles of its own reason, it can never have a ground to quit the clear evidence of its reason, to give place to a proposition, whose *revelation* has not a greater evidence than those principles have.

Traditional
revelation
much less.

§. 6. Thus far a man has use of reason, and ought to hearken to it, even in immediate and original revelation, where it is supposed to be made to himself: but to all those who pretend not to immediate *revelation*, but are required to pay obedience, and to receive the truths revealed to others, which, by the tradition of writings, or word of mouth, are conveyed down to them, reason has a great deal more to do, and is that only which can induce us to receive them. For matter of faith being only divine revelation, and nothing else; *faith*, as we use the word, (called commonly *divine faith*) has to do with no propositions, but those which are supposed to be divinely revealed. So that I do not see how those, who make revelation alone the sole object of *faith*, can say, that it is a matter of *faith*, and not of *reason*, to believe, that such or such a proposition, to be found in such or such a book, is of divine inspiration; unless it be revealed, that that proposition, or all in that book, was communicated by divine inspiration. Without such a revelation, the believing or not believing that proposition, or book, to be of divine authority, can never be *matter of faith*, but *matter of reason*; and such as I must come to an assent to only by the use of my reason, which can never require or enable me to believe that which is contrary to itself: it being impossible for reason ever to procure any assent to that, which to itself appears unreasonable.

In all things therefore, where we have clear evidence from our *ideas*, and those principles of knowledge I have abovementioned, *reason* is the proper judge; and *revelation*, though it may in consenting with it confirm its dictates, yet cannot in such cases invalidate its decrees: *nor can we be obliged, where we have the clear and evident sentence of reason, to quit it*
for

for the contrary opinion, under a pretence that it is matter of faith; which can have no authority against the plain and clear dictates of reason.

§. 7. But, *Thirdly*, there being many things wherein we have very imperfect notions, or none at all; and other things, of whose past, present, or future existence, by the natural use of our faculties, we can have no knowledge at all: these, as being beyond the *discovery* of our natural faculties, and above *reason*, are, when revealed, *the proper matter of faith*. Thus, that part of the angels rebelled against *GOD*, and thereby lost their first happy state; and that the *dead* shall rise, and live again: these, and the like, being beyond the *discovery of reason*, are purely *matters of faith*; with which *reason* has, directly, nothing to do.

Things above reason.

§. 8. But since *GOD*, in giving us the light of *reason*, has not thereby tied up his own hands from affording us, when he thinks fit, the light of revelation in any of those *matters*, wherein our natural faculties are able to give a probable determination; revelation, where God has been pleased to give it, *must carry it against the probable conjectures of reason*; because the mind, not being certain of the truth of that it does not evidently know, but only yielding to the probability that appears in it, is bound to give up its assent to such a testimony; which, it is satisfied, comes from one who cannot err, and will not deceive. But yet it still belongs to reason to judge of the truth of its being a revelation, and of the signification of the words wherein it is delivered. Indeed, if any thing shall be thought revelation, which is contrary to the plain principles of reason, and the evident knowledge the mind has of its own clear and distinct *ideas*, there reason must be hearkened to, as to a matter within its province: since a man can never have so certain a knowledge, that a proposition, which contradicts the clear principles and evidence of his own knowledge, was divinely revealed,

Or not contrary to reason, if revealed, are matter of faith.

or

or that he understands the words rightly, wherein it is delivered, as he has, that the contrary is true; and so is bound to consider and judge of it as a matter of reason, and not swallow it, without examination, as a matter of *faith*.

Revelation, in matters where reason cannot judge, or but probably, ought to be hearkened to.

§. 9. *First*, Whatever proposition is revealed, of whose truth our mind, by its natural faculties and notions, cannot judge, that is purely *matter of faith*, and above reason.

Secondly, All propositions, whereof the mind by the use of its natural faculties, can come to determine and judge from naturally acquired *ideas*, are *matter of reason*; with this difference still, that in those concerning which it has but an uncertain evidence, and so is persuaded of their truth only upon probable grounds, which still admit a possibility of the contrary to be true, without doing violence to the certain evidence of its own knowledge, and overturning the principles of all reason; in such probable propositions, I say, an evident revelation ought to determine our assent even against probability. For where the principles of reason have not evidenced a proposition to be certainly true or false, there clear revelation, as another principle of truth, and ground of assent, may determine; and so it may be matter of faith, and be also above reason; because reason, in that particular matter, being able to reach no higher than probability, *faith* gave the determination where reason came short; and *revelation* discovered on which side the truth lay.

In matters where reason can afford certain knowledge, that is to be hearkened to.

§. 10. Thus far the dominion of *faith* reaches, and that without any violence or hindrance to reason; which is not injured or disturbed, but assisted and improved, by new discoveries of truth, coming from the eternal fountain of all knowledge. Whatever God hath revealed, is certainly true; no doubt can be made of it. This is the proper object of faith: but

but whether it be a divine revelation or no, reason must judge; which can never permit the mind to reject a greater evidence to embrace what is less evident, nor allow it to entertain probability in opposition to knowledge and certainty. There can be no evidence, that any traditional revelation is of divine original, in the words we receive it, and in the sense we understand it, so clear, and so certain, as that of the principles of reason: and therefore, *nothing that is contrary to, and inconsistent with the clear and self-evident dictates of reason, has a right to be urged or assented to, as a matter of faith, wherein reason hath nothing to do.* Whatsoever is divine revelation, ought to over-rule all our opinions, prejudices and interests, and hath a right to be received with full assent: such a submission as this of our reason to faith, takes not away the land-marks of knowledge. This shakes not the foundations of reason, but leaves us that use of our faculties, for which they were given us.

§. II. *If the provinces of faith and reason are not kept distinct by these boundaries,* there will, in matters of religion, be no room for reason at all; and those extravagant opinions and ceremonies, that are to be found in the several religions of the world, will not deserve to be blamed.

If the boundaries be not set between faith and reason, no enthusiasm, or extravagancy in religion, can be contradicted.

For, to this crying up of *faith* in opposition to reason, we may, I think, in a good measure, ascribe those absurdities that fill almost all the religions which possess and divide mankind. For men having been principled with an opinion, that they must not consult reason in the things of religion, however apparently contradictory to common sense, and the very principles of all their knowledge, have let loose their fancies, and natural superstition; and have been, by them, led into so strange opinions, and extravagant practices in religion, that a considerate man cannot but stand amazed at their follies, and judge them so far from being acceptable to the great and wise GOD,
that

that he cannot avoid thinking them ridiculous, and offensive to a sober good man. So that, in effect, religion, which should most distinguish us from beasts, and ought most peculiarly to elevate us, as rational creatures, above brutes, is that wherein men often appear most irrational, and more senseless than beasts themselves. *Credo, quia impossibile est: I believe, because it is impossible*, might in a good man, pass for a folly of zeal; but would prove a very ill rule for men to chuse their opinions or religion by.

C H A P. XIX.

Of Enthusiasm.

Love of truth
necessary.

§. I. **H**E that would seriously set upon the search of truth, ought in the first place to prepare his mind with a love of it: for he that loves it not, will not take much pains to get it, nor be much concerned when he misses it. There is nobody in the commonwealth of learning, who does not profess himself a lover of truth: and there is not a rational creature that would not take it amiss to be thought otherwise of. And yet, for all this, one may truly say, there are very few lovers of truth for truth's sake, even amongst those who persuade themselves that they are so. How a man may know whether he be so in earnest, is worth enquiry: and I think there is this one unerring mark of it, *viz.* The not entertaining any proposition with greater assurance, than the proofs it is built upon will warrant. Whoever goes beyond this measure of assent, it is plain, receives not truth in the love of it; loves not truth for truth's sake, but for some other by-end. For the evidence that any proposition is true, (except such as are self-evident) lying only in the proofs a man has of it, whatsoever degrees of assent he affords it beyond the

the degrees of that evidence, it is plain all that surplusage of assurance is owing to some other affection, and not to the love of truth; it being as impossible, that the love of truth should carry my assent above the evidence, there is to me, that it is true, as that the love of truth should make me assent to any proposition, for the sake of that evidence, which it has not, that it is true; which is, in effect, to love it as a truth, because it is possible or probable that it may not be true. In any truth that gets not possession of our minds by the irresistible light of self-evidence, or by the force of demonstration, the arguments that gain it assent, are the vouchers and gage of its probability to us; and we can receive it for no other than such as they deliver it to our understandings. Whatsoever credit or authority we give to any proposition more than it receives from the principles and proofs it supports itself upon, is owing to our inclinations that way, and is so far a derogation from the love of truth, as such: which, as it can receive no evidence from our passions or interests, so it should receive no tincture from them.

§. 2. The assuming an authority of dictating to others, and a forwardness to prescribe to their opinions, is a constant concomitant of this bias and corruption of our judgments: for how almost can it be otherwise, but that he should be ready to impose on others belief, who has already imposed on his own? Who can reasonably expect arguments and conviction from him in dealing with others, whose understanding is not accustomed to them in his dealing with himself? Who does violence to his own faculties, tyrannizes over his own mind, and usurps the prerogative that belongs to truth alone, which is to command assent by only its own authority, *i. e.* by and in proportion to that evidence which it carries with it.

A forwardness
to dictate,
from whence.

§. 3. Upon this occasion I shall take the liberty to consider a third ground of

Force of en-
thusiasm.

assent,

assent, which, with some men, has the same authority, and is as confidently relied on, as either *faith* or *reason*; I mean *enthusiasm*. Which, laying by reason, would set up revelation without it. Whereby in effect it takes away both reason and revelation, and substitutes in the room of it the ungrounded fancies of a man's own brain, and assumes them for a foundation both of opinion and conduct.

Reason and
revelation.

§. 4. Reason is natural revelation, whereby the eternal father of light, and fountain of all knowledge, communicates to mankind that portion of truth which he has laid within the reach of their natural faculties. *Revelation* is natural reason enlarged by a new set of discoveries communicated by *GOD* immediately, which reason vouches the truth of, by the testimony and proofs it gives, that they come from *GOD*. So that he that takes away reason, to make way for *revelation*, puts out the light of both, and does much the same, as if he would persuade a man to put out his eyes, the better to receive the remote light of an invisible star by a telescope.

Rise of en-
thusiasm.

§. 5. Immediate *revelation* being a much easier way for men to establish their opinions, and regulate their conduct, than the tedious and not always successful labour of strict reasoning, it is no wonder that some have been very apt to pretend to revelation, and to persuade themselves that they are under the peculiar guidance of heaven in their actions and opinions, especially in those of them which they cannot account for by the ordinary methods of knowledge, and principles of reason. Hence we see, that, in all ages, men, in whom melancholy has mixed with devotion, or whose conceit of themselves has raised them into an opinion of a greater familiarity with *GOD*, and a nearer admittance to his favour, than is afforded to others, have often flattered themselves with a persuasion of an immediate intercourse with the Deity, and frequent communications

communications

munications from the divine spirit. *GOD* I own cannot be denied to be able to enlighten the understanding by a ray darted into the mind immediately from the fountain of light. This they understand he has promised to do, and who then has so good a title to expect it, as those who are his peculiar people, chosen by him, and depending on him?

§. 6. Their minds being thus prepared, whatever groundless opinion comes to settle itself strongly upon their fancies, is an illumination from the spirit of *GOD*, and presently of divine authority: and whatsoever odd action they find in themselves a strong inclination to do, that impulse is concluded to be a call or direction from heaven, and must be obeyed; it is a commission from above, and they cannot err in executing it.

Enthusiasm.

§. 7. This I take to be properly enthusiasm, which, though founded neither on reason nor divine revelation, but rising from the conceits of a warmed or over-weening brain, works yet, where it once gets footing, more powerfully on the persuasions and actions of men, than either of those two, or both together: men being most forwardly obedient to the impulses they receive from themselves; and the whole man is sure to act more vigorously, where the whole man is carried by a natural motion. For strong conceit, like a new principle, carries all easily with it; when got above common sense, and freed from all restraint of reason and check of reflection, it is heightened into a divine authority, in concurrence with our own temper and inclination.

§. 8. Though the odd opinions and extravagant actions enthusiasm has run men into, were enough to warn them against this wrong principle, so apt to misguide them both in their belief and conduct; yet the love of something extraordinary, the ease and glory it is to be inspired, and be above the common and natural ways of knowledge, so flatters many men's laziness,

Enthusiasm mistaken for seeing and feeling.

ignorance and vanity, that when once they are got into this way of immediate revelation, of illumination without search, and of certainty without proof and without examination, 'tis a hard matter to get them out of it. Reason is lost upon them: they are above it: they see the light infused into their understandings, and cannot be mistaken; 'tis clear and visible there, like the light of bright sun-shine; shews itself, and needs no other proof but its own evidence; they feel the hand of *GOD* moving them within, and the impulses of the spirit, and cannot be mistaken in what they feel. Thus they support themselves, and are sure reason hath nothing to do with what they see and feel in themselves; what they have a sensible experience of, admits no doubt, needs no probation. Would he not be ridiculous, who should require to have it proved to him, that the light shines, and that he sees it? It is its own proof, and can have no other. When the spirit brings light into our minds, it dispels darkness. We see it, as we do that of the sun at noon, and need not the twilight of reason to shew it us. This light from heaven is strong, clear, and pure; carries its own demonstration with it; and we may as rationally take a glow-worm to assist us to discover the sun, as to examine the celestial ray by our dim candle, reason.

§. 9. This is the way of talking of these men: they are sure, because they are sure; and their persuasions are right, only because they are strong in them. For, when what they say is stripped of the metaphor of seeing and feeling, this is all it amounts to; and yet these similies so impose on them, that they serve them, for certainty in themselves, and demonstration to others.

Enthusiasm
how to be
discovered.

§. 10. But to examine a little soberly this internal light, and this feeling on which they build so much. These men have, they say, clear light, and they see: they have an awakened sense, and they feel: this cannot, they are sure, be disputed them. For when a man says he
sees

sees or he feels, nobody can deny it him that he does so. But here let me ask: This seeing, is it the perception of the truth of the proposition, or of this, that it is a revelation from God? This feeling, is it a perception of an inclination or fancy to do something, or of the spirit of God moving that inclination? These are two very different perceptions, and must be carefully distinguished, if we would not impose upon ourselves. I may perceive the truth of a proposition, and yet not perceive that it is an immediate revelation from God. I may perceive the truth of a proposition in *Euclid*, without its being, or my perceiving it to be, a revelation: nay, I may perceive I came not by this knowledge in a natural way, and so may conclude it revealed, without perceiving that it is a revelation from God; because there be spirits, which, without being divinely commissioned, may excite those *ideas* in me, and lay them in such order before my mind, that I may perceive their connexion. So that the knowledge of any proposition coming into my mind, I know not how, is not a perception that it is from God. Much less is a strong persuasion that it is true, a perception that it is from God, or so much as true. But however it be called light and seeing, I suppose, it is at most but belief and assurance: and the proposition taken for a revelation, is not such as they know to be true, but take to be true. For where a proposition is known to be true, revelation is needless: and it is hard to conceive how there can be a revelation, to any one, of what he knows already. If therefore it be a proposition which they are persuaded, but do not know to be true, whatever they may call it, it is not seeing, but believing. For these are two ways, whereby truth comes into the mind, wholly distinct, so that one is not the other. What I see I know to be so by the evidence of the thing itself; what I believe, I take to be so upon the testimony of another: but this testimony I must know to be given, or else what ground have I of believing? I must see that it is God

that reveals this to me, or else I see nothing. The question then here is, how do I know that God is the revealer of this to me; that this impresson is made upon my mind by his holy spirit, and that therefore I ought to obey it? If I know not this, how great forever the assurance is that I am possessed with, it is groundless; whatever light I pretend to, it is but *enthusiasm*. For whether the proposition supposed to be revealed, be in itself evidently true, or visibly probable, or by the natural ways of knowledge uncertain, the proposition that must be well grounded and manifested to be true, is this, that God is the revealer of it, and that what I take to be a revelation, is certainly put into my mind by him, and is not an illusion, dropped in by some other spirit, or raised by my own fancy. For, if I mistake not, these men receive it for true, because they presume God revealed it. Does it not then stand them upon, to examine on what grounds they presume it to be a revelation from God? Or else all their confidence is mere presumption; and this light they are so dazzled with, is nothing but an *ignis fatuus*, that leads them continually round in this circle; *it is a revelation, because they firmly believe it; and they believe it, because it is a revelation.*

Enthusiasm
fails of evi-
dence, that
the proposi-
tion is from
God.

§. 11. In all that is of divine revelation, there is need of no other proof, but that it is an inspiration from God: for he can neither deceive, nor be deceived. But how shall it be known, that any proposition in our minds is a truth infused by God; a truth that is revealed to us by him, which he declares to us, and therefore we ought to believe? Here it is that *Enthusiasm* fails of the evidence it pretends to. For men thus possessed boast of a light whereby, they say, they are enlightened, and brought into the knowledge of this or that truth. But if they know it to be a truth, they must know it to be so either by its own self-evidence to natural reason, or by the rational proofs that make it out to be so. If they see
and

and know it to be a truth either of these two ways, they in vain suppose it to be a revelation. For they know it to be true by the same way that any other man naturally may know that it is so, without the help of revelation. For thus all the truths, of what kind soever, that men uninspired are enlightened with, came into their minds, and are established there. If they say, they know it to be true, because it is a revelation from God, the reason is good: but then it will be demanded, how they know it to be a *revelation* from God? If they say by the light it brings with it, which shines bright in their minds, and they cannot resist; I beseech them to consider, whether this be any more than what we have taken notice of already, *viz.* that it is a *revelation*, because they strongly believe it to be true. For all the light they speak of, is but a strong, though ungrounded persuasion of their own minds, that it is a truth. For rational grounds from proofs, that it is a truth, they must acknowledge to have none; for then it is not received as a *revelation*, but upon the ordinary grounds that other truths are received: and if they believe it to be true, because it is a *revelation*, and have no other reason for its being a *revelation*, but because they are fully persuaded, without any other reason that it is true, they believe it to be a *revelation*, only because they strongly believe it to be a *revelation*; which is a very unsafe ground to proceed on, either in our tenets or actions: and what readier way can there be to run ourselves into the most extravagant errors and miscarriages, than thus to set up fancy for our supreme and sole guide, and to believe any proposition to be true, any action to be right, only because we believe it to be so? The strength of our persuasions is no evidence at all of their own rectitude: crooked things may be as stiff and inflexible as strait; and men may be as positive and peremptory in error as in truth. How come else the untractable zealots in different and opposite parties? For if the light which every one thinks he has in his mind,

which in this case is nothing but the strength of his own persuasion, be an evidence that it is from God, contrary opinions may have the same title to be inspirations; and God will be not only the father of lights, but of opposite and contradictory lights, leading men contrary ways; and contradictory propositions will be divine truths, if an ungrounded strength of assurance be an evidence, that any proposition is a *divine revelation*.

Firmness of persuasion, no proof that any proposition is from God.

§. 12. This cannot be otherwise, whilst firmness of persuasion is made the cause of believing, and confidence of being in the right is made an argument of truth. *St. Paul* himself believed he did well, and that he had a call to it, when he persecuted the christians, whom he confidently thought in the wrong: but yet it was he, and not they, who were mistaken. Good men are men still, liable to mistakes, and are sometimes warmly engaged in errors, which they take for divine truths, shining in their minds with the clearest light.

Light in the mind, what.

§. 13. Light, true light in the mind is, or can be nothing else but the evidence of the truth of any proposition; and if it be not a self-evident proposition, all the light it has, or can have, is from the clearness and validity of those proofs upon which it is received. To talk of any other light in the understanding, is to put ourselves in the dark, or in the power of the prince of darkness, and by our own consent to give ourselves up to delusion, to believe a lye: for, if strength of persuasion be the light which must guide us, I ask, how shall any one distinguish between the delusions of Satan, and the inspirations of the Holy Ghost? He can transform himself into an angel of light. And they who are led by this Son of the Morning, are as fully satisfied of the illumination, *i. e.* are as strongly persuaded, that they are enlightened by the spirit of God, as any one who is so: they acquiesce and rejoice in it,
are

are acted by it; and nobody can be more sure, nor more in the right, (if their own strong belief may be judge) than they.

§. 14. He therefore that will not give himself up to all the extravagancies of delusion and error, must bring this guide of his *light within* to the trial. God, when he makes the prophet, does not unmake the man: he leaves all his faculties in their natural state, to enable him to judge of his inspirations, whether they be of divine original or no. When he illuminates the mind with supernatural light, he does not extinguish that which is natural. If he would have us assent to the truth of any proposition, he either evidences that truth by the usual methods of natural reason, or else makes it known to be a truth, which he would have us assent to, by his authority, and convinces us that it is from him, by some marks which reason cannot be mistaken in. Reason must be our last judge and guide in every thing. I do not mean, that we must consult reason, and examine whether a proposition, revealed from God, can be made out by natural principles; and if it cannot, that then we may reject it: but consult it we must, and by it examine whether it be a revelation from God or no: and if reason finds it to be revealed from God, reason then declares for it, as much as for any other truth, and makes it one of her dictates. Every conceit that thoroughly warms our fancies, must pass for an inspiration, if there be nothing but the strength of our persuasions, whereby to judge of our persuasions. If reason must not examine their truth by something extrinsical to the persuasions themselves, inspirations and delusions, truth and falshood, will have the same measure, and will not be possible to be distinguished.

Revelation
must be judg-
ed of by rea-
son.

§. 15. If this internal light, or any proposition which under that title we take for inspired, be conformable to the principles of reason, or to the word of God, which is attested

Belief no
proof of reve-
lation.

revelation,

revelation, *reason* warrants it, and we may safely receive it for true, and be guided by it in our belief and actions: if it receive no testimony nor evidence from either of these rules, we cannot take it for a revelation, or so much as for true, till we have some other mark that it is a revelation, besides our believing that it is so. Thus we see the holy men of old, who had revelations from God, had something else besides that internal light of assurance in their own minds, to testify to them that it was from God. They were not left to their own persuasions alone, that those persuasions were from God, but had outward signs to convince them of the author of those revelations. And when they were to convince others, they had a power given them to justify the truth of their commission from heaven; and by visible signs to assert the divine authority of a message they were sent with. *Moses* saw the bush burn without being consumed, and heard a voice out of it. This was something besides finding an impulse upon his mind to go to *Pharaoh*, that he might bring his brethren out of *Egypt*; and yet he thought not this enough to authorize him to go with that message, till God, by another miracle of his rod turned into a serpent, had assured him of a power to testify his mission by the same miracle repeated before them whom he was sent to. *Gideon* was sent by an angel to deliver *Israel* from the *Midianites*, and yet he desired a sign to convince him, that this commission was from God. These, and several the like instances to be found among the prophets of old, are enough to shew, that they thought not an inward seeing or persuasion of their own minds, without any other proof, a sufficient evidence that it was from God, though the scripture does not every where mention their demanding or having such proofs.

§. 16. In what I have said, I am far from denying that God can, or doth sometimes, enlighten men's minds in the apprehending of certain truths, or excite them to good actions, by the immediate influence and assistance of the holy spirit, without any extraor-

dinary signs accompanying it. But in such cases too we have reason and scripture, unerring rules to know whether it be from God or no. Where the truth embraced is consonant to the revelation in the written word of God, or the action conformable to the dictates of right reason, or holy writ, we may be assured that we run no risk in entertaining it as such; because, though perhaps it be not an immediate revelation from God, extraordinarily operating on our minds, yet we are sure it is warranted by that revelation which he has given us of truth. But it is not the strength of our private persuasion within ourselves, that can warrant it to be a light or motion from heaven; nothing can do that but the written word of God without us, or that standard of reason which is common to us with all men. Where reason or scripture is express for any opinion or action, we may receive it as of divine authority; but it is not the strength of our own persuasions which can by itself give it that stamp. The bent of our own minds may favour it as much as we please; that may shew it to be a fondling of our own, but will by no means prove it to be an offspring of heaven, and of divine original.

C H A P. XX.

Of Wrong Assent, or Error.

§. 1. **K**nowledge being to be had only of visible certain truth, *error* is not a fault of our knowledge, but a mistake of our judgment, giving assent to that which is not true.

Causes of error.

But if assent be grounded on likelihood, if the proper object and motive of our assent be probability, and that probability consists in what is laid down in the foregoing chapters, it will be demanded, how men come

come to give their assents contrary to probability. For there is nothing more common than contrariety of opinions; nothing more obvious, than that one man wholly disbelieves what another only doubts of, and a third stedfastly believes, and firmly adheres to. The reasons whereof, though they may be very various, yet, I suppose, may be all reduced to these four.

1. *Want of proofs.*
2. *Want of ability to use them.*
3. *Want of will to use them.*
4. *Wrong measures of probability.*

First, Want of
proofs.

§. 2. *First*, By *want of proofs*, I do not mean only the want of those proofs which are no where extant, and so are no where to be had; but the want even of those proofs which are in being, or might be procured. And thus men want proofs, who have not the convenience or opportunity to make experiments and observations themselves, tending to the proof of any proposition; nor likewise the convenience to enquire into, and collect the testimonies of others: and in this *state* are the greatest part of mankind, who are given up to labour, and enslaved to the necessity of their mean condition, whose lives are worn out only in the provisions for living. These men's opportunity of knowledge and enquiry are commonly as narrow as their fortunes; and their understandings are but little instructed, when all their whole time and pains is laid out to still the croaking of their own bellies, or the the cries of their children. It is not to be expected, that a man who drudges on, all his life, in a laborious trade, should be more knowing in the variety of things done in the world, than a packhorse, who is driven constantly forwards and backwards, in a narrow lane and dirty road, only to market, should be skilled in the geography of the country. Nor is it at all more possible, that he who wants leisure, books, and languages, and the opportunity of conversing with variety of men, should be in a condition to collect those testimonies and observations which are in being,
and

and are necessary to make out many, nay, most of the propositions, that in the societies of men are judged of the greatest moment; or to find out grounds of assurance so great, as the belief of the points he would build on them is thought necessary. So that a great part of mankind are, by the natural and unalterable state of things in this world, and the constitution of human affairs, unavoidably given over to invincible ignorance of those proofs on which others build, and which are necessary to establish those opinions; the greatest part of men, having much to do to get the means of living, are not in a condition to look after those of learned and laborious enquiries.

§. 3. What shall we say then? Are the greatest part of mankind, by the necessity of their condition, subjected to unavoidable ignorance in those things which are of greatest importance to them? (for of these it is obvious to enquire.) Have the bulk of mankind no other guide, but accident and blind chance, to conduct them to their happiness or misery? Are the current opinions, and licensed guides of every country, sufficient evidence and security to every man, to venture his greatest concerns on; nay, his everlasting happiness or misery? Or can those be the certain and infallible oracles and standards of truth, which teach one thing in *Christendom*, and another in *Turkey*? Or shall a poor countryman be eternally happy, for having the chance to be born in *Italy*; or a day-labourer be unavoidably lost, because he had the ill luck to be born in *England*? How ready some men may be to say some of these things, I will not here examine; but this I am sure, that men must allow one or other of these to be true, (let them chuse which they please) or else grant, that God has furnished men with faculties sufficient to direct them in the way they should take, if they will but seriously employ them that way, when their ordinary vocations allow them the leisure. No man is so wholly taken up with the attendance on the means of living, as to have no spare

Obj. What shall become of those who want them, answered.

spare time at all to think of his soul, and inform himself in matters of religion. Were men as intent upon this, as they are on things of lower concernment, there are none so enslaved to the necessities of life, who might not find many vacancies that might be husbanded to this advantage of their knowledge.

People hindered from enquiry.

§. 4. Besides those whose improvements and informations are strained by the narrowness of their fortunes, there are others, whose largeness of fortune would plentifully enough supply books, and other requisites for clearing of doubts, and discovering of truth; but they are *cooped in close, by the laws* of their countries, and the strict guards of those whose interest it is to keep them ignorant, lest, knowing more, they should believe the less in them. These are as far, nay farther *from the liberty and opportunities of a fair enquiry*, than those poor and wretched labourers we before spoke of; and, however they may seem high and great, are confined to narrowness of thought, and enslaved in that which should be the freest part of man, their understandings. This is generally the case of all those who live in places where care is taken to propagate truth without knowledge, where men are forced, at a venture, to be of the religion of the country, and must therefore swallow down opinions, as silly people do empiricks pills, without knowing what they are made of, or how they will work, and have nothing to do, but believe that they will do the cure; but in this are much more miserable than they, in that they are not at liberty to refuse swallowing what perhaps they had rather let alone, or to chuse the physician to whose conduct they would trust themselves.

2dly, Want of skill to use them.

§. 5. *Secondly*, Those who *want skill to use those evidences they have* of probabilities, who cannot carry a train of consequences in their heads, nor weigh exactly the preponderancy of contrary proofs and testimonies, making every circumstance its due allowance, may be easily misled to assent to positions that are not probable. There are some

some men of one, some but of two syllogisms, and no more; and others that can but advance one step farther. These cannot always discern that side on which the strongest proofs lie, cannot constantly follow that which in itself is the more probable opinion. Now that there is such a difference between men, in respect of their understandings, I think nobody, who has had any conversation with his neighbours, will question, though he never was at *Westminster-Hall*, or the *Exchange*, on the one hand; nor at *Alms-houses*, or *Bedlam*, on the other: which great difference in men's intellects, whether it rises from any defect in the organs of the body particularly adapted to thinking; or in the dulness or untractableness of those faculties, for want of use; or, as some think, in the natural differences of men's souls themselves; or some, or all of these together, it matters not here to examine; only this is evident, that there is a difference of degrees in men's understandings, apprehensions, and reasonings, to so great a latitude, that one may, without doing injury to mankind, affirm, that there is a greater distance between some men and others in this respect, than between some men and some beasts. But how this comes about, is a speculation, though of great consequence, yet not necessary to our present purpose.

§. 6. *Thirdly*, There are another sort of people that *want proofs*, not because they are out of their reach, but *because they will not use them*: who, though they have riches and leisure enough, and want neither parts nor other helps, are yet never the better for them. Their hot pursuit of pleasure, or constant drudgery in business, engages some men's thoughts elsewhere; laziness and idleness in general, or a particular aversion for books, study, and meditation, keep others from any serious thoughts at all; and some, out of fear that an impartial enquiry would not favour those opinions which best suit their prejudices, lives, and designs, content themselves, without examination, to take upon trust what they find convenient,

convenient, and in fashion. Thus most men, even of those that might do otherwise, pass their lives without an acquaintance with, much less a rational assent to, probabilities they are concerned to know, though they lie so much within their view, that to be convinced of them, they need but turn their eyes that way. But we know some men will not read a letter, which is supposed to bring ill news; and many men forbear to cast up their accompts, or so much as think upon their estates, who have reason to fear their affairs are in no very good posture. How men, whose plentiful fortunes allow them leisure to improve their understandings, can satisfy themselves with a lazy ignorance, I cannot tell; but methinks they have a low opinion of their souls, who lay out all their incomes in provisions for the body, and employ none of it to procure the means and helps of knowledge; who take great care to appear always in a neat and splendid outside, and would think themselves miserable in coarse clothes, or a patched coat, and yet contentedly suffer their minds to appear abroad in a pie-bald livery of coarse patches, and borrowed shreds, such as it has pleased chance, or their country taylor, (I mean the common opinion of those they have conversed with) to clothe them in. I will not here mention how unreaſonable this is for men that ever think of a future state, and their concernment in it, which no rational man can avoid to do sometimes; nor shall I take notice, what a shame and confusion it is, to the greatest contemners of knowledge, to be found ignorant in things they are concerned to know. But this, at least, is worth the consideration of those who call themselves gentlemen, That however they may think credit, respect, power, and authority, the concomitants of their birth and fortune, yet they will find all these still carried away from them by men of lower condition, who surpass them in knowledge. They who are blind will always be led by those that see, or else fall into the ditch: and he is certainly the most subjected, the most enslaved, who is

so in his understanding. In the foregoing instances, some of the causes have been shewn of wrong assent, and how it comes to pass, that probable doctrines are not always received with an assent proportionable to the reasons which are to be had for their probability: but hitherto we have considered only such probabilities, whose proofs do exist, but do not appear to him who embraces the error.

§. 7. *Fourthly*, There remains yet the last sort, who, even where the real probabilities appear, and are plainly laid before them, do not admit of the conviction, nor yield unto manifest reasons, but do either ἐπέχειν suspend their assent, or give it to the less probable opinion. And to this danger are those exposed, who have taken up *wrong measures of probability*, which are,

4thly, Wrong measures of probability; whereof,

1. *Propositions that are not in themselves certain and evident, but doubtful and false, taken up for principles.*
2. *Received hypotheses.*
3. *Predominant passions or inclinations.*
4. *Authority.*

§. 8. *First*, the first and firmest ground of probability, is the conformity any thing has to our own knowledge; especially that part of our knowledge which we have embraced, and continue to look on as principles. These have so great an influence upon our opinions, that it is usually by them we judge of truth, and measure probability to that degree, that what is inconsistent with our principles, is so far from passing for probable with us, that it will not be allowed possible. The reverence borne to these principles is so great, and their authority so paramount to all other, that the testimony not only of other men, but the evidences of our own senses are often rejected, when they offer to vouch any thing contrary to these established rules. How much the doctrine

First, Doubtful propositions taken for principles.

doctrine of innate principles, and that principles are not to be proved or questioned, has contributed to this, I will not here examine. This I readily grant, that one truth cannot contradict another; but withal I take leave also to say, that every one ought very carefully to beware what he admits for a principle, to examine it strictly, and see whether he certainly knows it to be true of itself by its own evidence, or whether he does only with assurance believe it to be so, upon the authority of others: for he hath a strong bias put into his understanding, which will unavoidably misguide his assent, who hath imbibed wrong principles, and has blindly given himself up to the authority of any opinion in itself not evidently true.

§. 9. There is nothing more ordinary, than that children should receive into their minds propositions (especially about matters of religion) from their parents, nurses, or those about them; which being insinuated into their unwary, as well as unbiaſſed understandings, and fastened by degrees, are at last (equally, whether true or false) riveted there, by long custom and education, beyond all possibility of being pulled out again. For men, when they are grown up, reflecting upon their opinions, and finding those of this sort to be as ancient in their minds as their very memories, not having observed their early insinuation, nor by what means they got them, they are apt to reverence them as sacred things, and not to suffer them to be prophaned, touched or questioned: they look on them as the *Urim* and *Thummim* set up in their minds immediately by GOD himself, to be the great and unerring deciders of truth and falsehood, and the judges to which they are to appeal in all manner of controversies.

§. 10. This opinion of his principles (let them be what they will) being *once established in any one's mind*, it is easy to be imagined, what reception any proposition shall find, how clearly soever proved, that shall invalidate their authority, or at all thwart with these internal oracles: whereas the grossest absurdities and improbabilities,

probabilities, being but agreeable to such principles, go down glibly, and are easily digested. The great obstinacy that is to be found in men firmly believing quite contrary opinions, though many times equally absurd, in the various religions of mankind, are as evident a proof, as they are an unavoidable consequence of this way of reasoning from received traditional principles. So that men will disbelieve their own eyes, renounce the evidence of their senses, and give their own experience the lye, rather than admit of any thing disagreeing with these sacred tenets. Take an intelligent *Romanist*, that from the very first dawning of any notions in his understanding hath had this principle constantly inculcated, *viz.* That he must believe as the church (*i. e.* those of his communion) believes, or that the Pope is infallible; and this he never so much as heard questioned, till at forty or fifty years old he met with one of other principles: how is he prepared easily to swallow, not only against all probability, but even the clear evidence of his senses, the doctrine of *transubstantiation*? This principle has such an influence on his mind, that he will believe that to be flesh, which he sees to be bread. And what way will you take to convince a man of any improbable opinion he holds, who, with some philosophers, hath laid down this as a foundation of reasoning, That he must believe his reason (for so men improperly call arguments drawn from their principles) against his senses? Let an *enthusiast* be principled that he or his teacher is inspired, and acted by an immediate communication of the divine spirit, and you in vain bring the evidence of clear reasons against his doctrine. Whoever therefore have imbibed wrong principles, are not, in things inconsistent with these principles, to be moved by the most apparent and convincing probabilities, till they are so candid and ingenuous to themselves, as to be persuaded to examine even those very principles, which many never suffer themselves to do.

Secondly, Received hypotheses.

§. 11. *Secondly*, Next to these are men whose understandings are cast into a mould, and fashioned just to the size of a *received hypothesis*. The difference between these and the former is, that they will admit of matter of fact, and agree with dissenters in that; but differ only in assigning of reasons, and explaining the manner of operation. These are not at that open defiance with their senses, as the former; they can endure to hearken to their information a little more patiently; but will by no means admit of their reports in the explanation of things; nor be prevailed on by probabilities, which would convince them, that things are not brought about just after the same manner that they have decreed within themselves that they are. Would it not be an insufferable thing for a learned professor, and that which his scarlet would blush at, to have his authority, of forty years standing, wrought out of hard rock *Greek* and *Latin*, with no small expence of time and candle, and confirmed by general tradition, and a reverend beard, in an instant overturned by an upstart novelist! Can any one expect that he should be made to confess, That what he taught his scholars thirty years ago, was all error and mistake; and that he sold them hard words and ignorance at a very dear rate? What probabilities, I say, are sufficient to prevail in such a case? And whoever, by the most cogent arguments, will be prevailed with, to disrobe himself at once of all his old opinions, and pretences to knowledge and learning, which, with hard study, he hath all his time been labouring for; and turn himself out stark naked, in quest afresh of new notions? All the arguments can be used, will be as little able to prevail, as the wind did with the traveller to part with his cloak, which he held only the faster. To this of wrong hypothesis, may be reduced or the errors that may be occasioned by a true hypothesis, right principles, but not rightly understood. There is nothing more familiar than this. The instances of men contending for different opinions, which they all derive

derive from the infallible truth of the scripture, are an undeniable proof of it. All that call themselves christians allow the text that says, μετανοείτε, to carry in it the obligation to a very weighty duty. But yet how very erroneous will one of their practices be, who, understanding nothing but the *French*, take this rule with one translation to be, *repentez vous*, repent; or with the other, *faites penitence*, do penance?

§. 12. *Thirdly*, Probabilities, which cross men's appetites and *prevailing passions*, run the same fate. Let never so much probability hang on one side of a covetous man's reasoning, and money on the other, it is easy to foresee which will outweigh. Earthly minds, like mud walls, resist the strongest batteries; and though, perhaps, sometimes the force of a clear argument may make some impression, yet they nevertheless stand firm, keep out the enemy truth, that would captivate or disturb them. Tell a man, passionately in love, that he is jilted; bring a score of witnesses of the falshood of his mistress, it is ten to one but three kind words of her's shall invalidate all their testimonies. *Quod volumus, facile credimus; what suits our wishes, is forwardly believed*; is, I suppose, what every one hath more than once experimented; and though men cannot always openly gainsay or resist the force of manifest probabilities, that make against them, yet yield they not to the argument; not but that it is the nature of the understanding constantly to close with the more probable side; but yet a man hath a power to suspend and restrain its enquiries, and not permit a full and satisfactory examination, as far as the matter in question is capable, and will bear it to be made. Until that be done, there will be always these *two ways left of evading the most apparent probabilities*.

Thirdly, Predominant passions.

§. 13. *First*, That the arguments being (as for the most part they are) brought in words, *there may be a fallacy latent in them*; and the consequences being, perhaps, many in train, they may be some of them

The means of evading probabilities: First, Supposed fallacy.

incoherent. There are very few discourses so short, clear, and consistent, to which most men may not, with satisfaction enough to themselves, raise this doubt; and from whose conviction they may not, without reproach of dissingenuity or unreasonableness, set themselves free with the old reply, *Non persuadebis, etiamsi persuaseris; though I cannot answer, I will not yield.*

Secondly,
Supposed ar-
guments for
the contrary.

§. 14. Secondly, Manifest probabilities may be evaded, and the assent withheld upon this suggestion, That *I know not yet all that may be said on the contrary side.*

And therefore, though I be beaten, it is not necessary I should yield, not knowing what forces there are in reserve behind. This is a refuge against conviction, so open and so wide, that it is hard to determine when a man is quite out of the verge of it.

What proba-
bilities deter-
mine the as-
sent.

§. 15. But yet there is some end of it, and a man having carefully enquired into all the grounds of probability and unlikeliness, done his utmost to inform himself in all particulars fairly, and cast up the sum total on both sides, may in most cases come to acknowledge, upon the whole matter, on which side the probability rests; wherein some proofs in matter of reason, being suppositions upon universal experience, are so cogent and clear, and some testimonies in matter of fact so universal, that he cannot refuse his assent. So that, I think, we may conclude, that in propositions, where, though the proofs in view are of most moment, yet there are sufficient grounds to suspect that there is either fallacy in words, or certain proofs, as considerable, to be produced on the contrary side, there assent, suspense, or dissent, are often voluntary actions: but *where* the proofs are such as make it highly probable, and there is not sufficient ground to suspect that there is either fallacy of words, (which sober and serious consideration may discover) nor equally valid proofs yet undiscovered latent on the other side, (which also the nature of the thing may, in some cases, make plain to a con-

siderate

siderate man) there, I think, *a man*, who has weighed them, *can scarce refuse his assent* to the side on which the greater probability appears. Whether it be probable, that a promiscuous jumble of printing letters should often fall into a method and order, which should stamp on paper a coherent discourse; or that a blind fortuitous concourse of atoms, not guided by an understanding agent, should frequently constitute the bodies of any species of animals: in these and the like cases, I think, nobody that considers them, can be one jot at a stand, which side to take, nor at all waver in his assent. *Lastly*, When there can be no supposition, (the thing in its own nature indifferent, and wholly depending upon the testimony of witnesses) that there is as fair testimony against, as for the *matter of fact* attested; which by enquiry is to be learned, *v. g.* whether there was 1700 years ago such a man at *Rome* as *Julius Caesar*: in all such cases, I say, I think it is not in any rational man's power to refuse his assent; but that it necessarily follows, and closes with such probabilities. In other less clear cases, I think it is in a man's power to suspend his assent; and, perhaps, content himself with the proofs he has, if they favour the opinion that suits with his inclination or interest, and so stop from farther search. But that a man should afford his assent to that side, on which the less probability appears to him, seems to me utterly impracticable, and as impossible, as it is to believe the same thing probable and improbable at the same time.

§. 16. As knowledge is no more arbitrary than perception; so, I think, assent is no more in our power than knowledge. When the agreement of any two *ideas* appears to our minds, whether immediately, or by the assistance of reason, we can no more refuse to perceive, no more avoid knowing it, than we can avoid seeing those objects which we turn our eyes to, and look on in daylight: and what, upon full examination, we find the most probable, we cannot deny our assent to. But

Where it is in our power to suspend it.

though we cannot hinder our knowledge, where the agreement is once perceived; nor our assent, where the probability manifestly appears upon due consideration of all the measures of it; yet *we can hinder both knowledge and assent, by stopping our enquiry*, and not employing our faculties in the search of any truth. If it were not so, ignorance, error, or infidelity, could not in any case be a fault. Thus in some cases we can prevent or suspend our assent: but can a man, versed in modern or ancient history, doubt whether there be such a place as *Rome*, or whether there was such a man as *Julius Cæsar*? Indeed there are millions of truths, that a man is not, or may not think himself concerned to know, as whether our king *Richard* the third was crooked-backed, or no; or whether *Roger Bacon* was a mathematician, or a magician. In these and such-like cases, where the assent, one way or other, is of no importance to the interest of any one, no action, no concernment of his following, or depending thereon, there it is not strange that the mind should give itself up to the common opinion, or render itself to the first comer. These and the like opinions are of so little weight and moment, that, like motes in the sun, their tendencies are very rarely taken notice of. They are there, as it were, by chance, and the mind lets them float at liberty. But where the mind judges that the proposition has concernment in it; where the assent or not assenting is thought to draw consequences of moment after it, and good or evil to depend on chusing or refusing the right side, and the mind sets itself seriously to enquire, and examine the probability; there, I think, it is not in our choice to take which side we please, if manifest odds appear on either. The greater probability, I think, in that case, will determine the assent; and a man can no more avoid assenting, or taking it to be true, where he perceives the greater probability, than he can avoid knowing it to be true, where he perceives the agreement or disagreement of any two *ideas*.

If

If this be so, the foundation of error will lie in wrong measures of probability; as the foundation of vice in wrong measures of good.

§. 17. *Fourthly*, The fourth, and last *wrong measure of probability* I shall take notice of, and which keeps in ignorance or error more people than all the other together, is that which I have mentioned in the foregoing chapter, I mean, the *giving up our assent to the common received opinions* either of our friends or party, neighbourhood or country. How many men have no other ground for their tenets, than the supposed honesty, or learning, or number of those of the same profession? As if honest or bookish men could not err; or truth were to be established by the vote of the multitude; yet this with most men serves the turn. The tenet has had the attestation of reverend antiquity; it comes to me with the passport of former ages, and therefore I am secure in the reception I give it: other men have been, and are of the same opinion, (for that is all is said) and therefore it is reasonable for me to embrace it. A man may more justifiably throw up cross and pile for his opinions, than take them up by such measures. All men are liable to error, and most men are in many points, by passion or interest, under temptation to it. If we could but see the secret motives that influenced the men of name and learning in the world, and the leaders of parties, we should not always find, that it was the embracing of truth for its own sake, that made them espouse the doctrines they owned and maintained. This at least is certain, there is not an opinion so absurd, which a man may not receive upon this ground. There is no error to be named, which has not had its professors; and a man shall never want crooked paths to walk in, if he thinks that he is in the right way, wherever he has the footsteps of others to follow.

Fourthly, authority.

Men not in so
many errors
as is imagined.

§. 18. But notwithstanding the great noise is made in the world about errors and opinions, I must do mankind that right, as to say, *there are not so many men in errors and wrong opinions, as is commonly supposed.* Not that I think they embrace the truth; but indeed because concerning those doctrines they keep such a stir about, they have no thought, no opinion at all. For, if any one should a little catechize the greatest part of the partizans of most of the sects in the world, he would not find, concerning those matters they are so zealous for, that they have any opinions of their own: much less would he have reason to think, that they took them up on the examination of arguments, and appearance of probability. They are resolved to stick to a party that education or interest has engaged them in; and there, like the common soldiers of an army, shew their courage and warmth as their leaders direct, without ever examining, or so much as knowing the cause they contend for. If a man's life shews that he has no serious regard for religion, for what reason should we think, that he beats his head about the opinions of his church, and troubles himself to examine the grounds of this or that doctrine? It is enough for him to obey his leaders, to have his hand and his tongue ready for the support of the common cause, and thereby approve himself to those who can give him credit, preferment or protection in that society. Thus men become professors of and combatants for those opinions they were never convinced of, nor *profelytes* to; no, nor ever had so much as floating in their heads; and though one cannot say there are fewer improbable or erroneous opinions in the world than there are, yet this is certain, there are fewer that actually assent to them, and mistake them for truths, than is imagined.

C H A P. XXI.

Of the Division of the Sciences.

§. 1. **A**LL that can fall within the compass of human Understanding being either, *First*, the nature of things, as they are in themselves, their relations, and their manner of operation: or, *Secondly*, that which man himself ought to do, as a rational and voluntary agent, for the attainment of any end, especially happiness: or, *Thirdly*, the ways and means whereby the knowledge of both the one and the other of these is attained and communicated: I think *science* may be divided properly into these *three sorts*.

Three sorts.

§. 2. *First*, The knowledge of things, as they are in their own proper beings, their constitutions, properties, and operations; whereby I mean not only *matter* and *body*, but spirits also, which have their proper natures, constitutions, and operations, as well as bodies. This, in a little more enlarged sense of the word, I call *Φυσικὴ*, or *natural philosophy*. The end of this is bare speculative truth; and whatsoever can afford the mind of man any such, falls under this branch, whether it be God himself, angels, spirits, bodies, or any of their affections, as number and figure, &c.

First, *Physica*.

§. 3. *Secondly*, *Πρακτικὴ*, the skill of right applying our own powers and actions, for the attainment of things good and useful. The most considerable under this head is *Ethicks*, which is the seeking out those rules and measures of human actions, which lead to happiness, and the means to practise them. The end of this is not bare speculation, and the knowledge of truth; but right, and a conduct suitable to it.

Secondly, *Practica*.

§. 4. *Thirdly*, The third branch may be called *Σημειωτικὴ*, or the *doctrine of signs*, the most usual whereof being words, it is

Thirdly, *Σημειωτικὴ*.

aptly

aptly enough termed also *Λογική*, *logick*; the business whereof is to consider the nature of signs the mind makes use of for the understanding of things, or conveying its knowledge to others. For, since the things the mind contemplates, are none of them, besides itself, present to the understanding, it is necessary that something else, as a sign or representation of the thing it considers, should be present to it: and these are *ideas*. And because the scene of *ideas* that makes one man's thoughts, cannot be laid open to the immediate view of another, nor laid up any where but in the memory, a no very sure repository; therefore to communicate our thoughts to one another, as well as record them for our own use, signs of our *ideas* are also necessary. Those which men have found most convenient, and therefore generally make use of, are articulate sounds. The consideration then of *ideas* and *words*, as the great instruments of knowledge, makes no despicable part of their contemplation, who would take a view of human knowledge in the whole extent of it. And perhaps, if they were distinctly weighed, and duly considered, they would afford us another sort of logick and critick, than what we have been hitherto acquainted with.

This is the
first division
of the objects
of knowledge.

§. 5. *This seems to me the first and most general, as well as natural division of the objects of our understanding.* For a man can employ his thoughts about nothing, but either the contemplation of *things* themselves, for the discovery of truth; or about the things in his own power, which are his own actions, for the attainment of his own ends; or the *signs* the mind makes use of, both in the one and the other, and the right ordering of them for its clearer information. All which three, *viz. things* as they are in themselves knowable; *actions* as they depend on us, in order to happiness; and the right use of *signs* in order to knowledge, being *toto cælo* different, they seemed to me to be the three great provinces of the intellectual world, wholly separate and distinct one from another.

I N D E X.

I N D E X.

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